Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/texasmedicine83unse

ANUARY 1987

TexasMedicine

71 70th Texas Legislature: preview
74 Who, me? Testify?
81 Patient recall systems
106 Continuing education directory

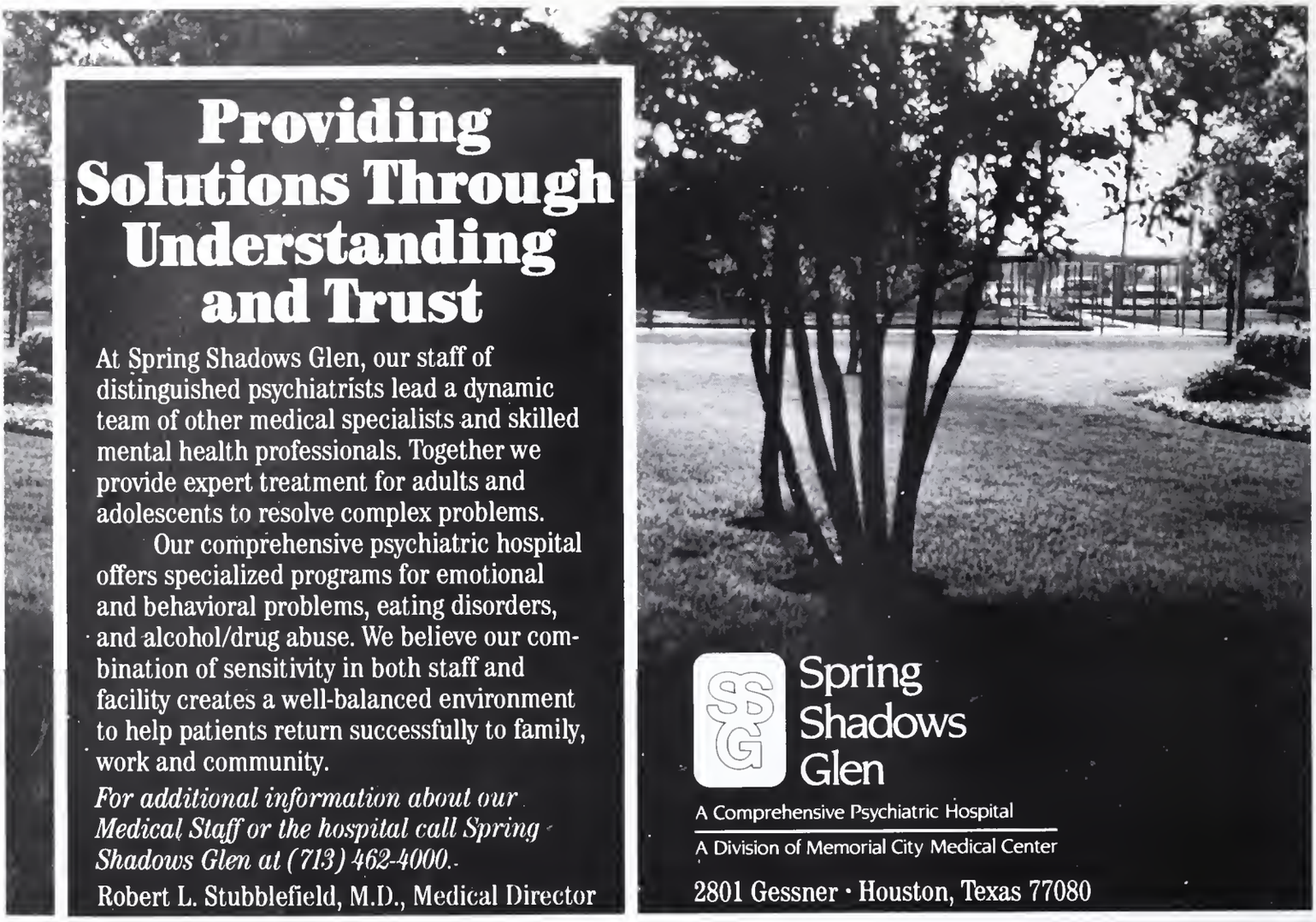
Focus issue: Alzheimer's disease

59 Help for your patients, families

DEMENTIA
DEMENTIA
DEMENTIA
DEMENTIA
DEMENTIA

U.C. SAN FRANCISCO
JAN 26 1987

THE LIBRARY
ACQUISITIONS DIV.-SERIALS
UNIV. OF CALIF-SAN FRANCISCO
SAN FRANCISCO CA 94143



Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080

Taking Giant Steps.

The smallest step can be a milestone . . . the simplest task, a major accomplishment. For individuals suffering from a physical disability, the day-to-day tasks we all take for granted can be major obstacles to independence and mobility.

At **Dallas Rehabilitation Institute (DRI)**, our team of physicians, therapists and nurses can plan an individualized treatment program to help your patient regain as much function and independence as possible. With the most modern facilities and equipment, and therapists who are rehabilitation specialists, we offer a unique approach to rehabilitation.

Our comprehensive rehabilitation programs include:

- **spinal cord injury**
- **head injury**
- **stroke**
- **arthritis**
- **amputee**
- **spinal pain**

Call us to arrange a private tour of our facilities or to receive more information on the disease category rehabilitation programs offered at DRI.

DRI

9713 Harry Hines Blvd.
Dallas, TX 75220-5441
(214) 358-6000
1-800-441-9199 (TX only)

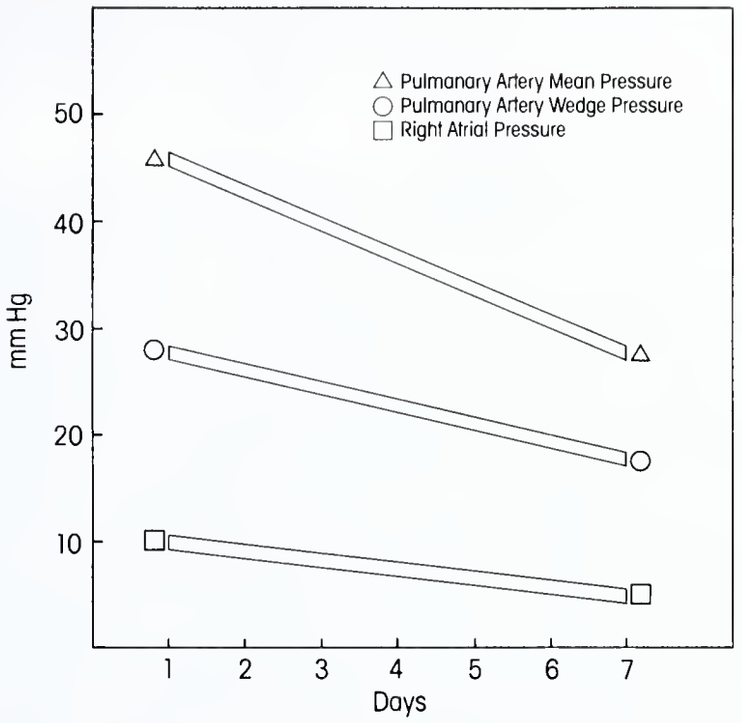
Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml
and 10-ml vials (0.25 mg/ml)

REDUCES FLUID OVERLOAD and eases the burden on the failing heart

Significantly improves hemodynamics



Ten patients with CHF showed marked hemodynamic improvement after seven days of BUMEX®(bumetanide/Roche) (mean values ± SE). Adapted from Olesen, *et al* [1]

References: 1. Olesen KH, *et al. Postgrad Med J 51*(Suppl 6):54-63, 1975. **2.** Handler B, Dhingra RC, Rosen KM: *J Clin Pharmacol 21*:706-711, Nov-Dec 1981 **3.** Brater DC, *et al Clin Pharmacol Ther 34* 207-213, Aug 1983 **4.** Brater DC, Fox WR, Chennavasin P. *J Clin Pharmacol 21* 599-603, Nov-Dec 1981. **5.** Davies DL, *et al: Clin Pharmacol Ther 15*.141-155, Feb 1974

BUMEX®
bumetanide/Roche
0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

BUMEX® (bumetanide/Roche)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephratic syndrome.
Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.
Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity
CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment
WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels
Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity
Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use. Safety and effectiveness below age 18 not established
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease)
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration: The usual total daily dosage is 0.5 to 2 0 mg and in most patients is given as a single dose.
Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day
HOW SUPPLIED: *Tablets,* 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Paks of 30, Tel-E-Dose® cartons of 100. Imprint on tablets: 0 5 mg—ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.
Ampuls, 2 ml, 0 25 mg/ml, boxes of ten
Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

ROCHE®

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ROCHE

OVERLOAD

Reduce fluid volume and improve hemodynamics in CHF

Edema due to congestive heart failure often demands highly effective diuresis to reduce the fluid load on the failing heart. Bumex® (bumetanide/Roche) is the next generation in loop diuretic therapy for three powerful reasons. It moves out an unsurpassed volume of fluid and sodium, resulting in significant reductions in edema and right atrial and pulmonary artery wedge pressures.[1,2] It's almost completely absorbed through the GI tract, so it's easy to titrate.[3] And Bumex completes high-volume diuresis fast—within four hours at usual doses.[4,5] Your patients spend less time in diuresis, more time in normal activities.

Bumex has a good safety profile; however, as with all loop diuretics, Bumex, if given in excessive amounts, can lead to profound diuresis with water and electrolyte depletion, including hypokalemia. Serum electrolytes should be monitored periodically, especially in patients on low salt diets or those treated for prolonged periods or on high doses.

Bumex®
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets, 2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

First line loop diuretic therapy

Please see references and summary of product information on preceding page.

Copyright © 1986 by Hoffmann-La Roche Inc. All rights reserved.

Texas Medicine

VOLUME 83 JANUARY 1987

Contents

ARTICLES

20 Evaluation and treatment of dementia
J. Thomas Hutton, MD, PhD

26 Strategies for the pharmacological treatment of Alzheimer's disease
Samuel D. Brinkman, PhD; John W. Largen, Jr, PhD

32 Alzheimer's dementia: recent developments in cholinergic pharmacology
Donald E. Moss, PhD; Lisa A. Rodriguez, BS

37 Lacunar dementia: a form of vascular dementia
Gustavo C. Román, MD

40 Nutritional concerns for patients with Alzheimer's disease
Lee Ann Loney, BS; J. Thomas Hutton, MD, PhD; Janice R. Stewart, PhD; Julian E. Spallholz, PhD

46 Caretaker coping and Alzheimer's patient decline
Jeffrey W. Elias, PhD; J. Thomas Hutton, MD, PhD; Avery H. Bratt, PhD; Beverly A. Miller, MA; Lisa A. Weinstein

48 The role of coping behaviors for primary caregivers of Alzheimer's patients
Jean Pearson Scott, PhD; P. N. McKenzie, MS; D. Slack, MS; J. Thomas Hutton, MD, PhD

51 Alzheimer's disease and exercise
Berry N. Squyres, MD

54 The Alzheimer patient: interior design considerations
Joann L. Shroyer, PhD; J. Thomas Hutton, MD, PhD; Georgina M. Anderson, MS

59 Alzheimer's disease resource directory

EDITORIALS

6 Alzheimer's disease
J. Thomas Hutton, MD, PhD

7 Alzheimer's disease in Texas: a public health perspective
Robert Bernstein, MD

8 Research, support groups aid dementia patients and families
J. Howard Frederick, MD

9 Alzheimer's disease: changing health care priorities and legislative update
William P. Hobby

FEATURE

71 Preview: The 70th Texas Legislature
Kim Ross

NEWS

TMA in action
12 Winter conference to look at medicine's future
12 Delegates meet in Austin to set association policy
13 House selects Dr Ainsworth to receive award in May
13 Board establishes lectureship in honor of Philip R. Overton
13 Dr Brame delivers good news to House of Delegates
14 Dr Goodman to direct division of Medical Economics

Health line
14 Cleft palate group establishes hotline
14 Award recognizes innovative medical devices
14 Pediatric reference book available from AAP

Socioeconomics
14 Blues consider new contract: alternative to PPOs, HMOs

19 Newsmakers

DEPARTMENTS

66 Clinical abstracts
74 Medicine and the law: The treating physician as an expert witness
81 Practice management: Patient recall systems
82 Deaths
86 Medicine in literature
106 Continuing education directory

ON THE COVER

This issue of *Texas Medicine* is devoted to scientific articles on Alzheimer's disease. Topics of discussion include Alzheimer's disease research, treatment strategies, and nutritional and physical fitness concerns for patients with the disorder. The articles begin on page 20; editorials on the subject are on pages 6–10.

COMING NEXT MONTH

Scheduled for the February issue of *Texas Medicine* are articles on pelvic inflammatory disease in the adolescent, bladder cancer, folk healing, and drug treatment of pneumonia due to *Pneumocystis carinii*. Also scheduled is a special section describing tort reform, including the results of a survey recently conducted for TMA.

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

Harold R. High, MD, Cuero
Secretary

Merle W. Delmer, MD, San Antonio
James M. Graham, MD, Austin
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

Jim Bob Brame, MD, Eldorado
President

Nancy W. Dickey, MD, Richmond
Vice President

David Vanderpool, MD, Dallas
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Robert G. Mickey
Chief Executive Officer

EDITORIAL STAFF

1801 N Lamar Blvd, Austin 78701
Telephone (512) 477-6704

Rae Vaigert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Shari Henson, Production Manager/Editorial Assistant
Patty Illich, Administrative Secretary/Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
L. Maximilian Buja, MD, Dallas
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701

Subscription rates, plus 6.125% state sales tax for Texas subscribers only, are: Non-dues-paying members, $16 per year plus $.98 sales tax, non-members and institutions, $20 per year plus $1.25 sales tax, foreign, $24 peryear plus $1.25 sales tax; foreign, $24 US currency; single copy, $2 plus $.13 sales tax

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association

Postmaster: Please direct correspondence to Rae Vaigert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701

Texas Medical Association 1987 Winter Conference

February 7, 1987
9 a.m.–5 p.m.
La Mansion Hotel, Austin

Conference Program

Featured Speakers

William S. Hotchkiss, MD, Chesapeake, Virginia, president-elect, American Medical Assaciation, will speak an current issues affecting physicians.

Robert D. Burnett, MD, Los Altas, California, chairman af the AMA Council an Medical Service, will talk about the impact af increasing campetition an the medical professian.

Ronald E. Henderson, MD, Birmingham, Alabama, member af the AMA Cauncil on Medical Service, will discuss the current status and future trends of physicians' fees and reimbursement.

James H. Sammons, MD, Chicago, executive vice president, American Medical Assaciatian, will speak about physicians' responsibilities for the profession's future.

Panel and Breakout Sessions

A panel, "Tart, Court, and Insurance Refarm: The 1987 Legislature's View of the Liability Crisis," will be presented. Also planned are breakaut sessians on "Physician Fees and Reimbursement Changes by Medicare," "Maintaining Professianal Standards—A Look at Peer Review and Medical Discipline in Texas," and "A Medical Legislative Prognasis for the 1987 Sessian."

Hospitality

Conference participants are invited ta a lunchean an Saturday and ta a hospitality hour fallawing the canference. The reception will be hasted by the Texas Employers' Insurance Association.

Additional Programs

A special pragram for new officers of caunty medical sacieties will be conducted on Saturday afternoan. Resident and student sectian meetings alsa will be held Saturday, and pastgraduate courses will be held February 7–8. Most TMA committees, councils, and boards alsa will meet in conjunction with the canference.

Provisional Member Requirement

If you are a pravisianal member, yau may fulfill the state-level meeting requirement by attending the regular canference sessions on Saturday, September 7, fram 9 a.m. to 5 p.m. You are encauraged also to participate in the special pre-conference marketing workshop on Friday evening.

Special Pre-Conference Marketing Workshop

A special workshop, "Marketing Tips for a Successful Practice," will be presented Friday evening, February 6 from 7 to 9:30 p.m. at La Mansion Hotel.

The workshop, conducted by Jeffrey J. Denning of Conomikes Associates, Inc., will be a condensed version of the popular seminar offered through TMA's practice management program. There will be no charge to workshop participants.

The workshop has been approved as meeting the criteria for 2½ hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

Additional information about the workshop is available from the TMA Department of Medical Staff and Practice Management at 512-477-6704, ext. 262. Because enrallment in the free workshop is limited, you are encouraged to pre-register by mailing the form below to TMA, Department of Medical Staff and Practice Management, 1801 North Lamar Blvd., Austin, TX 78701.

I plan to attend the workshop, **"Marketing Tips for a Successful Practice."**

Name _____

Address _____

City, State, Zip _____

Phone _____

☐ Regular TMA Member

☐ Provisional TMA Member

Registration and Housing

There is no fee or pre-registration for the conference program on February 7. However, you are encouraged to use the accompanying official housing request form to make hotel reservations. Housing is limited; deadline for reservations is January 23, 1987.

Continuing Medical Education Credit

The Texas Medical Association designates the conference program as meeting the criteria for five hours credit, and the pre-conference marketing workshop, and postgraduate courses as meeting the criteria for hour-for-hour credit in Category 1 of the Physician's Recognition Award of the American Medical Association. The Texas Medical Association is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing education for physicians.

The postgraduate courses have been reviewed and are acceptable for Prescribed hours by the American Academy of Family Physicians.

Texas Medical Association
Winter Conference
February 7, 1987
Austin, Texas

FOR HOUSING BUREAU USE ONLY

MAIL TO
CENTRAL HOUSING BUREAU
P.O. BOX 1967
AUSTIN, TX 78767

OFFICIAL HOUSING REQUEST FORM
• PLEASE READ CAREFULLY •

_PLEASE PRINT OR TYPE ALL ITEMS TO ASSURE ACCURACY
_COMPLETE EACH PART BELOW IN DETAIL FOR CORRECT AND RAPID PROCESSING
_ALL CONFIRMATIONS WILL BE SENT TO INDIVIDUAL INDICATED IN PART I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary

NAME OF PERSON REQUESTING ROOMS

(First Name) (Last Name) (M Initial)

(Name of Company or Firm)

(Street Address or P.O. Box Number)

(City) (State) (Zip)

(Country) (Area Code) (Phone Number)

(Credit Card) (Number) (Expiration Date)

PART II

INSTRUCTIONS: Select THREE Hotel/Motels of your choice. No request will be processed without THREE choices

(FIRST CHOICE) (SECOND CHOICE) (THIRD CHOICE)

PART III

INSTRUCTIONS: 1. PRINT OR TYPE NAMES OF ALL PERSONS OCCUPYING EACH ROOM
2. SELECT TYPE ROOM DESIRED WITH ARRIVAL AND DEPARTURE DATES
3. SUPPLEMENTAL LIST FOR ADDITIONAL ROOMS MUST USE SAME FORMAT
4. PRINT OR TYPE LAST NAME FIRST.

	OCCUPANT'S NAME/S (PRINT LAST NAME FIRST)	CHECK ONE	
ROOM NO. 1	1.	☐ SINGLE (1RM-1 per-1 Bed)	ARR. DATE
	2.	☐ DOUBLE (1RM-2 per-1 Bed)	DEP. DATE
	3.	☐ DBL/DBL (1RM-2 per.-2 Beds)	ARR. TIME
	4.	☐ TRIPLE (1RM-3 per.-2 Beds)	AM ___ PM ___
		☐ QUAD (1RM-4 per.-2 Beds)	(Check One)
		☐ P + 1 (Parlor & 1 bedroom)	
		☐ P + 2 (Parlor & 2 bedrooms)	

* NOTE: Reservation will be held only until 6 p.m. unless a credit card number is provided or a deposit sent to the hotel.

FOR USE OF ASSN. ONLY

PLEASE RECHECK ALL ITEMS FOR CORRECT INFORMATION.

Hotel Information

La Mansion Hotel
6505 IH-35 North
S $72 D $82

Marriott (Airport)
6121 IH-35 North
S $62 D $72

Embassy Suites (Airport)
5901 IH-35 North
$65 all

Deadline for housing reservations is January 23, 1987.

Postgraduate Courses

February 7–8, 1987

In conjunction with the TMA 1987 Winter Conference, two postgraduate courses will be offered at the Embassy Suites North Hotel, near the La Mansion Hotel.

Basic Life Support for Physicians, sponsored in conjunction with the American Heart Association, Texas Affiliate, Inc., will be taught Saturday, February 7, from 1 to 5 p.m.

Newer Drugs: Cardiovascular, Nonsteroidal Anti-Inflammatory, Gastrointestinal, and Drug Delivery Systems will be offered on Sunday, February 8, from 8 a.m. to 1 p.m.

Additional information, including course descriptions and faculty, is available from the TMA Department of Annual Session and Scientific Programming, 512-477-6704, ext. 233.

Registration for Postgraduate Courses

Check must accompany request for course registration. Make check payable to Texas Medical Association, and mail to TMA, Business Office, 1801 North Lamar Blvd., Austin, TX 78701. Your registration will be acknowledged. Refunds will be made through February 6. Courses are primarily offered for TMA members. Nonmembers will be admitted on a space-available basis. The fee for students, residents, and retired physicians is one-half the nonmember fee.

Basic Life Support for Physicians $ _____
Fee: Member $40; Nonmember $45

Newer Drugs: Cardiovascular, Nonsteroidal Anti-Inflammatory, Gastrointestinal, and Drug Delivery Systems $ _____
Fee: Member $75; Nonmember $80

TOTAL $ _____

Name _____

Address _____

City, State, Zip _____

Alzheimer's disease

As recently as 15 years ago Alzheimer's disease was thought to be an obscure dementing illness and was relegated to the fine print of neurology and psychiatry textbooks. Changing demographics and revisions in medical nomenclature have transformed Alzheimer's disease into one of the most pressing health care problems of our time. The precise magnitude of the problem in the United States is unknown, but estimates of those afflicted by Alzheimer's disease and related dementing disorders range up to 2 1/2 million persons. Mortality is increased in Alzheimer's disease; survival following diagnosis is one third to one half as long for Alzheimer's patients as for nonaffected older persons (1). The heightened mortality and increasing estimates of prevalence combine to characterize Alzheimer's disease as the fourth or fifth leading cause of death in the US. So serious is the impact of this disorder on both patient and caregiver that death is often met by a sense of relief.

The seriousness of Alzheimer's disease as a major public health problem is now clearly recognized. The federal government and many states have identified the medical, social, and economic impacts of Alzheimer's disease. These identified needs have generally outstripped the scientific means and funding resources by which to ameliorate them.

The number of persons affected in Texas by Alzheimer's disease is uncertain, but by using accepted assumptions a reasonable estimate can be made. The average prevalence from ten epidemiologic studies of senile onset (age 65 years or older) of severe organic brain syndromes was found to be 5% (2). The average estimate of presenile onset (less than 65 years) was found to be 0.1% of the population. The Bureau of State Planning and Resource Development estimates the following population for Texas. In 1980 there were approximately 1,371,161 persons 65 years and older, and 12,858,030 persons less than 65 years; in 1990 there will be an estimated 1,747,828 persons 65 years and older, and 15,893,522 less than 65 years; and in 2000 about 1,980,828 Texans will be 65 years and older, and 18,351,023 less than 65 years. By applying the prevalence figures for severe dementia to the estimated Texas population, the following figures are reached: 1980—81,416 cases; 1990—103,284 cases; and 2000—117,392 cases.

In order to arrive at an accurate estimate of prevalence, mild cases must be considered in addition to severe cases. Estimates of prevalence of mild dementia range from 2.6% to 15.4% of persons over the age of 65 years. Using the mean value of 9% and applying this to the 65 and over population of Texas, the following additional cases are estimated: 1980—123,404; 1990—157,305; and 2000—178,275. An overall estimate of the prevalence of mild and severe dementia in Texas is 204,820 cases in 1980, 260,589 cases in 1990, and 295,667 cases in 2000. An interpolated estimate for the beginning of 1987 consists of some 238,281 persons in Texas with mild or severe dementia. Approximately 60% of these cases of dementia result from Alzheimer's disease, giving rise to an estimate of 122,892 in 1980, 156,353 in 1990, and 177,400 in 2000. Interpolation for 1987 arrives at a figure of 142,969 Texans who are currently afflicted by Alzheimer's disease.

Alzheimer's disease affects the patient by stripping away those aspects of personhood that are held most dear: the ability to think, to remember, to interact with loved ones, and to lead productive and happy lives. In addition, the lives of the caregivers are severely affected. For every patient with Alzheimer's disease, on average two additional caregivers are severely affected by the illness. Because of the great emotional, physical, and economic consequences of having a loved one with dementia, these caregivers might also be considered victims of the dementing illness. The Texas Senate Committee on Health and Human Resources chaired by Senator Chet Brooks recently completed a study of the long-term care needs of Texans with Alzheimer's disease. This study found that over two-thirds of primary caregivers were women and over 80% were above the age of 55 years. The study identified a need for increased support for clinical and basic research. It identified a need for improved information transfer to the long-term care industry and affected family members. Curricular changes for schools of medicine, nursing, allied health, and law were determined. The study also cited existing resources as well as encouraged the development of a variety of direct community-based and institutional services for patients and families affected by Alzheimer's disease.

Alzheimer's disease exacts a heavy emotional, physical, and financial toll on the caregivers. The caregivers often find outside help difficult or impossible to obtain. Alzheimer's disease is at present incorrectly defined by third-party payers as a "mental disorder" rather than a neurological disorder. This definition may create serious financial jeopardy for Alzheimer's families. A lack of alternatives to total home care or institutional care exists in many Texas communities. Lack of adequate information on behavioral management of symptoms of dementia exists.

The biggest problem, however, is the inability to prevent, or arrest this inexorably progressive disorder. A recent report suggests that tetrahydroaminoacridine may be effective in improving the cognitive functioning of patients with Alzheimer's disease (3). If this finding is substantiated by further clinical studies, then tetrahydroaminoacridine or other centrally acting anticholinesterase agents may become the mainstay of pharmacologic treatment of Alzheimer's disease.

The solution to the problem of Alzheimer's disease and related disorders must ultimately come from the research laboratory. Several states have established geographically dispersed Alzheimer's disease research and treatment centers for the purpose of encouraging clinical and basic research and increasing the rate of information transfer to health care professionals and to the general public. For example, the recently established Texas Tech Alzheimer Center which receives support from private donations and competitive grant programs encourages multidisciplinary and comprehensive research, carries out continuing education programs for health professionals and the lay public, and attempts to identify improved health delivery systems for the special problems faced by the Alzheimer patient and family.

The establishment and rapid growth of the National Institute on Aging have been important in fostering federally supported research. Efforts are under way at the federal and state levels to redefine Alzheimer's disease in order to make it acceptable for Medicare and Medicaid coverage. Day activity and treatment centers for Alzheimer's disease victims have begun to spring up across the nation. Most of these care centers rely solely on private funding and are financially tenuous, but they have demonstrated significant benefits to patients and their families. Alzheimer's disease support groups are growing rapidly and provide important information and understanding to affected individuals (see resource directory in this issue of *Texas Medicine*). Referral of affected family members to support groups is helpful and warranted.

The Texas Department of Health has been active in the development of a network of concerned persons and in developing more appropriate guidelines for care of Alzheimer's patients in long-term care institutions. The Texas Department on Aging has been increasing the flow of information to consumers and long-term care institutions. The physician continues to play a crucial role in the difficult management process of demented patients. An important medical service continues to be the identification of the 10% to 20% of patients with dementing illnesses for which some underlying, specifically treatable disorder can be identified. Some symptoms of dementia can be benefited pharmacologically and behaviorally. Nevertheless, much of the physician's time may be spent providing understanding, encouragement, and advice to distraught family members.

An accompanying editorial by Lt Gov William P. Hobby refers to Alzheimer's disease as the "disease of the century." The demographic destiny of Texas is for increasing numbers of persons and families affected by Alzheimer's disease, unless a cause and cure can be identified. The frightening spectre of an approaching epidemic of dementing illness will require cooperation between various levels of government, practicing physicians, long-term care industry, and academic institutions in order to reduce the caregiver burden and to work toward a cure for Alzheimer's disease.

J. THOMAS HUTTON, MD, PHD
Guest Editor, Associate Professor and Director, Texas Tech Alzheimer Center, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

REFERENCES

1. Katzman R: The prevalence and malignancy of Alzheimer disease. A major killer, editorial. Arch Neurol 33(4):217–218, 1976.
2. Mortimer JA, Hutton JT: Epidemiology and etiology of Alzheimer's disease, in Hutton JT, Kenny AD (eds): Senile Dementia of the Alzheimer Type. New York, Liss, 1985, pp 177–196.
3. Summers WK, Majovski, LV, Marsh GM, et al: Oral Tetrahydroaminoacridine in long-term treatment of senile dementia, Alzheimer type. N Engl J Med 315:1241–1245, 1986.

Editor's Note: The editorial board and staff of *Texas Medicine* gratefully acknowledge the time and commitment that Dr Hutton has devoted to the preparation of this issue of *Texas Medicine*.

Alzheimer's disease in Texas: a public health perspective

Alzheimer's disease, the major form of dementia in old age, is a serious and growing problem. About 11% of the present population in the United States is older than 65 and by the year 2030, the percentage is expected to rise to about 18%. There are now more than 1.5 million Texans older than 65, and in ten years this number will be more than 2 million. A Texas Department of Health study of patients currently in nursing homes revealed that 66% had been diagnosed as having dementia, and 44% were identified specifically as having Alzheimer's disease. It is clear that this problem must be addressed. Each new case severely affects the family and friends, and in the end becomes a concern for the public who will share in the burden of caring for the patient. As the population ages, Alzheimer's disease will become an ever increasing problem for society as a whole.

Obviously, one of the greatest needs we face is to find the cause of Alzheimer's disease. The uniqueness of this disease mandates intensive research on a wide range. There remain many questions besides the disease's etiology such as diagnostic technologies, effective medical intervention, and dealing with accompanying psychosocial factors.

There are many illnesses, sometimes mistaken for Alzheimer's disease, which require specialized care, and which must be managed in completely different ways from Alzheimer's disease. Therefore, early accurate diagnosis is vital. A careful diagnostic assessment requires coordination on a multidisciplinary team level looking at biological, psychological, and social factors involved in the illness. It is understandable that in some cases it may be difficult to obtain such thorough evaluation. Once the disease is diagnosed, however, the patient will need continued medical management. The physician will be required to devote a great deal of time to monitoring treatment and answering questions from the family. Treating the Alzheimer's disease patient requires using every available resource.

Although Alzheimer's disease cannot yet be cured, there is much that can be done to help maximize the patient's function. Families must have a good understanding of the disease. They need guidance in how to help the patient use his remaining mental abilities, and how to better deal with inevitable behavioral problems. An effective family support system is essential, since most Alzheimer's disease patients live outside a nursing home for many years before final admission for the latter phase of the illness. Families can learn from the progress that has been made in understanding the special needs of these patients. The sooner this effort begins, the better for the patient and family. Alzheimer's disease is a progressive, chronic illness that generally leads to a need for constant and long-term supervision, and care in a residential situation. At present, few nursing homes focus on the special problems of the demented individual. Only recently has there been any concentrated effort to encourage public awareness and professional

education about Alzheimer's disease. Many paraprofessionals in medical and social work fields are currently working without adequate training to help patients and families affected by the condition. It can be expected that the need for physicians committed to geriatric medicine will increase by at least 8% by the end of the century.

On a national level, the Department of Health and Human Services is engaged in a wide variety of research, education, and demonstration projects. The National Institute on Aging has established ten centers to study Alzheimer's disease and related disorders. The future availability of resources to deal with them will depend upon federal policies. Currently in Texas, the Senate Committee on Health and Human Resources is conducting a series of statewide public hearings concerning appropriate and effective services for persons with Alzheimer's disease. The committee will report its findings and recommendations to the 70th Legislature. This and other efforts, such as the initiatives by Texas Tech and other teaching institutions, will certainly influence the future of Alzheimer's disease activities in Texas.

We are now witnessing an explosion of information regarding Alzheimer's disease. This material needs to be made accessible to families, professionals, and policy makers. The Texas Department of Health has found the Alzheimer's Regional Network concept to be an effective information and referral clearinghouse for the primary care giver and the professional.

The many questions that still remain in regard to Alzheimer's disease presents each of us with a major challenge for the future. Through our cooperative efforts of sharing the information we have, the challenge can be met. We can do something for the generations to come that will lighten the burden of Alzheimer's disease on the family and the health care delivery system.

ROBERT BERNSTEIN, MD
Commissioner of Health, Texas Department of Health, 1100 W 49th St, Austin, TX 78756–3199

Research, support groups aid dementia patients and families

When the eponym, Alzheimer's disease, was used to describe a type of presenile dementia (ages 50–70), no one would have realized what an important step this would be. However, with the establishment of the National Institute for Aging, geriatric research gained greater credibility, and it was only a matter of time before an interest in dementia would be forthcoming. Pathological studies soon showed that the early occurrence of disorientation to time, which had so often been observed, was accompanied by degeneration of the cells of the nucleus basilis of Meynert. This same pathological entity was then discovered in many cases of senile dementia, which were soon labelled as senile dementia, Alzheimer type (SDAT). Soon both conditions were and still are considered together as Alzheimer's disease.

Since a pathological process was found to accompany one type of dementia, great interest was generated in geriatric research to find the pathological disease process in other dementias. First dementia was differentiated from delirium, which was nearly always reversible. As time went on, dementias resulting from infection, tumors, drugs, depression, nutritional deficiency (vitamin B12 and folic acid deficiency), and alcohol (Wernicke's encephalopathy) were found to be treatable and sometimes completely reversible. Other dementias caused by Pick's disease, multiple brain infarcts, and terminal Parkinson's disease were found to be irrevocably unreversible.

Research into Alzheimer's disease is being conducted at several major centers in the United States. However, since the disease is a degenerative process of brain cells, reversibility of the disease would seem to require regeneration of brain cells. Perhaps prevention would be a more realistic goal for research at this time. Heredity seems to be an important factor.

The TMA Committee on Aging and Nursing Homes has been investigating the frequency with which Alzheimer's disease is being diagnosed in Texas. Questionnaires for this survey were sent to 6,036 primary care physicians and 1,300 psychiatrists. The 514 primary care physicians who answered the survey reported that they had treated 13,534 patients with this diagnosis over the past three years, and 102 psychiatrists reported treating 2,922 Alzheimer's disease patients during the same period of time, for a total of 16,456. The total number of patients with all kinds of dementia was 26,450.

The responding physicians reported that they are treating 3,148 Alzheimer's disease patients at home, 5,762 patients in nursing homes, and 546 such patients in other types of facilities.

Remarks made on the returned survey dealt with the difficulties in diagnosing Alzheimer's disease. Some physicians perceived Alzheimer's disease as a convenient "popular" diagnosis. Major conflicts were said to occur due to difficulties in getting patients with this disease admitted to hospitals for study and in getting financial help from Title XIX in appropriate cases for nursing home care. Two physicians stated that they were serving as advisors to local Alzheimer's disease support groups.* A few physicians said that they had parents afflicted with the disease.

Ninety primary care physicians and 30 psychiatrists reported that none of the patients they were presently treating had a diagnosis of Alzheimer's disease.

Currently there is a very active Alzheimer's Disease and Related Disorders Association, Inc, with chapters in major cities. More help is needed from the public sector in financing services and respite help for families burdened with these patients.

It is hoped that the present concerns about this disease by the public, by government, and by the medical community will result in new answers to the problems posed to the patient, his family, and his doctor.

J. HOWARD FREDERICK, MD
Chairman, TMA Committee on Aging and Nursing Homes, 8711 Village Dr, Ste 318, San Antonio, TX 78217.

*A listing of local support groups and other resources for families and Alzheimer's disease patients begins on p 59.

Alzheimer's disease: changing health care priorities and legislative update

One hundred and fifty years ago our Texas forefathers struggled to create a nation out of a frontier wilderness. Winning the independence of Texas, creating a viable economy, and improving the quality of life were difficult. But these problems were faced and they were solved. At that time, the health issues facing Texans were very much different from those we face today. The practice of medicine in Texas was haphazard, physicians were scarce, and treatments were very different from those now available. Therapies included bleeding, calomel, quinine, and assorted cure-all medicines (1). The scarcity of doctors and the location of the few doctors in the larger communities left many sick persons to obtain medical advice through correspondence. Newspaper advertisements hawked various treatments for a cash remittance. Opium was sold over the counter and gave rise to drug addiction. But medical "care" was by no means the only threat to health. Cholera, pulmonary infections, surgery, trauma, and childbirth had high mortality rates. Tuberculosis was the greatest single killer of adults, and gastrointestinal ills were great among children (2). Life expectancy was less than 40 years.

The improvements in health and health care that have occurred since that time are obvious. Childbirth is relatively safe; surgical techniques have become more sophisticated; many potentially treacherous infections can now be controlled easily. Diagnostic capabilities are much more effective, and treatments more specific. But despite the progress, challenges remain—some of them in frightening proportions and some of them new. Alzheimer's disease—once extremely rare in Texas—has become so important that it is being called "the disease of the century" (3), primarily because of the increased average age of our citizens. In 1900, only about 40% of people would live to the age at which geriatric illnesses occur. Today about 80% of persons live to the age of risk for developing geriatric diseases. Expanded life expectancy is a very good thing indeed, but it does bring about these new realities. Of these geriatric illnesses, Alzheimer's disease is the most costly, feared, and destructive to the quality of life.

As of the 1980 census, more than 1.3 million Texas residents were 65 years old or older. Texans over 65 currently represent 9.6% of our population and are the most rapidly growing segment of our population. By the year 2040, this older segment of our population may triple. It is important to recall that from 7% to 10% of these persons over the age of 65 will suffer from a dementing illness, unless the cause or cure is found. Using the estimate that 10% of persons 65 years or older have some dementia, about 130,000 persons in Texas have this medical problem today. That is about equal to the population of Amarillo. With the increased numbers of older persons forecast for Texas in the next 30 years, more than 300,000 persons—the approximate population of Fort Worth—may be affected.

In state government the perception has grown rapidly that Alzheimer's disease is a serious health care issue that deserves attention. A task force on Alzheimer's disease was appointed in 1985 by Gov Mark White, Speaker Gib Lewis, and myself. More recently the Senate Health and Human Resources Committee, chaired by Sen Chet Brooks, has been delving into the subject. Based in part on the findings of these hearings and studies, legislation will be introduced at the next legislative session. A series of public hearings have been held to obtain testimony of appropriate and effective services for victims and their families. Although this process is not quite complete, already a number of observations and potential approaches to alleviating the suffering have come to light. I would like to list some of the observations that have been made.

1. It is known that Alzheimer's disease is a progressive neurological disorder with known pathological brain changes. The cause and cure are unknown. Although the disease causes change in behavior, it is incorrectly defined for purposes of reimbursement as "a mental illness" rather than as a neurological disorder. This makes it an unacceptable diagnosis for Medicaid, Medicare, and many other third-party payers. This creates a great financial burden on the families that at times is catastrophic.

2. A person affected by Alzheimer's disease typically has memory loss, disorientation, poor judgment, and decline in all intellectual processes (4).

3. Medical treatment is limited at present. About 10% to 20% of persons with a dementia syndrome can be shown to have some underlying medical condition for which treatment is available and effective (5). Over 50% of persons with dementia suffer from Alzheimer's disease (6).

4. The overall course of the disease is about ten years and gives rise to progressive loss of brain function. This disease can be considered as occurring in four phases: an initial pre-diagnosis period, a period of moderate memory and cognitive impairment, a period of severe impairment, and a terminal phase requiring total care. Usually family members provide the care in most of the cases and for a prolonged period of time. At some point, however, the care becomes so extensive that the victim may have to be placed in a nursing home.

5. Alzheimer's disease causes tremendous suffering on the part of the families who must watch the relentless progression of the disease and the gradual loss of the family member they once knew.

6. The loss of economic productivity of the victims and the caregivers is immense and affects the economy of the state.

7. Changing demographics predict that the magnitude of suffering will grow if steps are not taken now.

Actions directed at the problems associated with Alzheimer's disease and other dementing illnesses will be needed. Already courses of action have been identified that could assist the victims and their families. Potential approaches consist of short-term amelioration of the problem and long-term eradication of the disease.

Some of these initiatives will be costly. I am sure you have read about projected shortfalls in tax revenues. With declining revenues from petroleum, the legislature will be faced with some very difficult choices. Choices will consist of curtailing

services or enhancing revenues. Input from constituents as to concerns and priorities will be helpful.

This year 150 state representatives and 31 state senators will struggle with some difficult problems now facing Texas. These legislators may not need the physical courage shown by their forefathers at the Alamo, but they will require great moral courage. Some of today's problems, such as Alzheimer's disease, will not be easy to confront. Let us hope that the collective wisdom and determination of state government, our universities, the private sector, and our citizens will create positive steps toward easing the burden and finding the cure for Alzheimer's disease. I pledge to do my part.

WILLIAM P. HOBBY
Lieutenant Governor, The State of Texas, Office of the Lieutenant Governor, Austin, TX 78711–2068.

REFERENCES

1. Weems JE: Dream of Empire: A Human History of the Republic of Texas 1836–1846. New York, Simon and Schuster, 1971, pp 33–55.
2. Rosenberg CE: What it was like to be sick in 1884. Amer Heritage Oct/Nov: 23, 1984.
3. Thomas L: On the problem of dementia. Discovery 2:34, 1981.
4. Hutton JT: Clinical nosology of the dementing illnesses, in Maletta GJ, Pirozzolo FJ (eds): The Aging Nervous System: Advances in Neurogerontology, vol 5. New York, Praeger, 1980, pp 145–174.
5. Hutton JT: Results of clinical assessment for the dementia syndrome: implications for epidemiologic studies, in Mortimer JA, Schuman LM (eds): The Epidemiology of Dementia: Monographs in Epidemiology and Biostatistics. New York, Oxford University Press, 1981,
pp 62–69.
6. Katzman R: The prevalence and malignancy of Alzheimer disease. Arch Neurol 33:217–218, 1976.

What is your best alternative?

Explore your options

Get the facts so you can make an informed choice.

- Components of alternative systems
- Advantages and disadvantages of various systems
- Evaluating contracts
- How to co-exist successfully with other systems
- Develop a business plan
- Implement needed changes in your practice
- And more.

American Medical Association
Department of Practice Management

Presents a NEW workshop

ALTERNATIVE DELIVERY & FINANCING SYSTEMS: Your Options and How to Evaluate Them℠

- ☐ Health Maintenance Organizations
- ☐ Preferred Provider Organizations
- ☐ Individual Practice Associations
- ☐ Practice Mergers
- ☐ Physician-Hospital Joint Ventures
- ☐ Creating Your Own Alternative

In-depth one-day sessions commence in September, 1986, at nationwide locations. Complete and mail the Registration Form below or call our special REGISTRATION HOT-LINE NUMBER COLLECT 312/645-4958

REGISTRATION FORM—Alternative Delivery & Financing Systems

☐ AMA Member or staff employee of member
Regular Price $360 Team Price* $290

☐ Non-Member
Regular Price $460 Team Price* $390

☐ Payment Enclosed $_____
Please make check payable to the American Medical Association.

Charge my credit card. ☐ Master Card ☐ Visa

Acct. No._____ Exp. Date_____

Signature_____

Name_____

Specialty/Title_____

Address_____

City_____State_____Zip_____

Office Telephone_____

Team Participant_____

Additional Team Participant_____
Please list names, specialties, and membership status of other registrants on an additional sheet

Please recognize my practice as:
☐ Solo
☐ Partnership (2 physicians)
☐ Group (3 physicians or more)

TO REGISTER complete this form, cut along the dotted line, and mail in an envelope along with your payment to:

American Medical Association
Dept. of Practice Management
535 North Dearborn Street
Chicago, Illinois 60610
ATTN: Registrar

*Team price applies to each additional person after the first registration, at the regular price, who attends the same program
Prices subject to change without notice

Check choice of workshop location and date:

Phoenix, AZ
☐ Wednesday, December 10

Los Angeles, CA
☐ Wednesday, January 21

San Francisco, CA
☐ Wednesday, November 19

Denver, CO
☐ Friday, November 14
☐ Wednesday, January 28

Ft. Lauderdale, FL
☐ Wednesday, December 10

Orlando, FL
☐ Friday, December 12

Atlanta, GA
☐ Wednesday, December 3

Chicago, IL (AMA)
☐ Thursday, November 6
☐ Wednesday, December 10
☐ Friday, January 16

New Orleans, LA
☐ Wednesday, December 10

Baltimore, MD
☐ Wednesday, November 12
☐ Friday, January 23

Dearborn, MI
☐ Friday, November 14
☐ Wednesday, January 21

Kansas City, MO
☐ Wednesday, November 5
☐ Friday, January 16

St. Louis, MO
☐ Friday, November 7
☐ Wednesday, January 14

Las Vegas, NV
☐ Friday, December 12

Buffalo, NY
☐ Wednesday, November 5

New York, NY
☐ Friday, November 7
☐ Wednesday, January 14

Raleigh, NC
☐ Friday, December 5

Cincinnati, OH
☐ Wednesday, January 28

Tulsa, OK
☐ Wednesday, December 3

Nashville, TN
☐ Friday, December 12

Austin, TX
☐ Wednesday, January 28

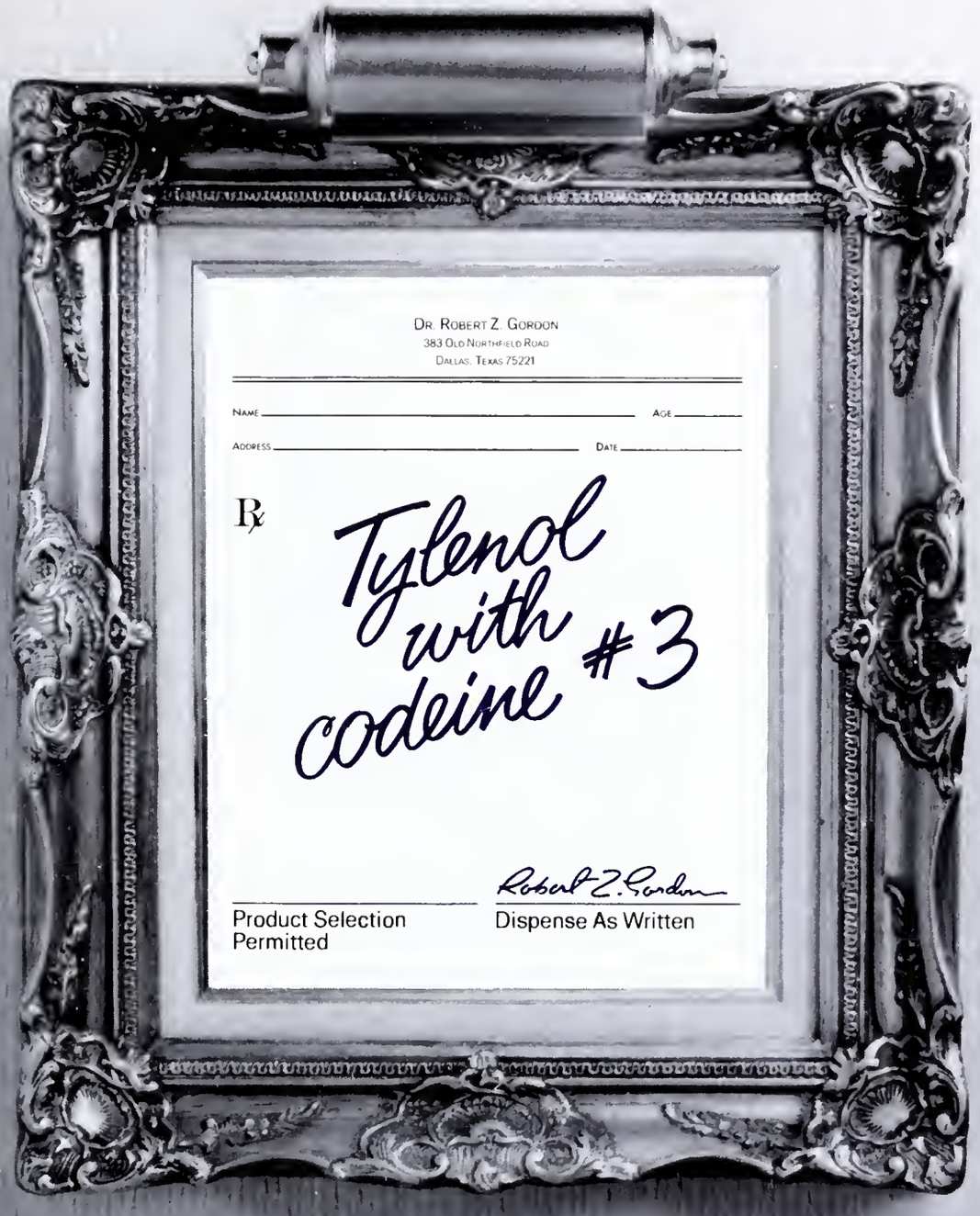
El Paso, TX
☐ Friday, January 30

Salt Lake City, UT
☐ Friday, December 5

Seattle, WA
☐ Wednesday, November 12
☐ Friday, January 30

MAIL TODAY or CALL COLLECT 312/645-4958

4309-CB24-REV



CREATE A SIGNED ORIGINAL

to be sure your patients get...

Tylenol®

ACETAMINOPHEN

with codeine phosphate

TABLETS C-III ELIXIR C-V

Tablets: Contain Codeine Phosphate*: No. 3—30 mg; No. 4—60 mg—plus Acetaminophen 300 mg.

Elixir: Each 5 mL contains 12 mg Codeine Phosphate* plus 120 mg Acetaminophen (Alcohol 7%).

*Warning: May be habit forming.

© McNEILAB, INC., 1987

TYCT 6445-A

TMA IN ACTION

Winter conference to look at medicine's future

La Mansion Hotel, Austin, will host Texas Medical Association's winter conference, Saturday, Feb 7, 1987. The conference program follows the theme "Forecast '87: Reading Medicine's Future."

For the first time, the association will offer a preconference practice management seminar. Scheduled for Friday, Feb 6, the seminar is free of charge.

Saturday's program features James H. Sammons, MD, Chicago, executive vice-president of the American Medical Association. Dr Sammons is a past president of TMA. Joining him on the program are William S. Hotchkiss, MD, Chesapeake, Va, president-elect of the AMA; Robert D. Burnett, MD, Los Altos, Calif, chairman of the AMA Council on Medical Service; and Ronald E. Henderson, MD, Birmingham, Ala, a member of the AMA Council on Medical Service.

Breakout sessions and panels will address professional liability, tort reform, and other legislative issues; medical discipline; and physician fees and reimbursement.

Two postgraduate courses are available with a registration fee: "Basic Life Support for Physicians," Saturday, Feb 7, from 1 to 5 pm, and "Newer Drugs: Cardiovascular, Nonsteroidal Anti-Inflammatory, Gastrointestinal, and Delivery Systems," Sunday, Feb 8, from 8 am to 1 pm. All of the courses qualify for credit under category 1 of the AMA Physician's Recognition Award. Also on the conference agenda are a special program for new county medical society officers and many council, board, and committee meetings.

The deadline for housing reservations is Jan 23, 1987.

Further information on the conference is available from Robert G. Mickey, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512) 477–6704.

Delegates meet in Austin to set association policy

Texas Medical Association's House of Delegates has set association policy on drug and alcohol detection programs and solicitation of private patients by public institutions. The delegates also considered peer review organizations, TMA involvement in a statewide physician-directed alternate delivery system, and medical discipline during their Nov 21–22 session at the Hyatt Regency Austin.

A recommendation supporting testing of physicians and other health care workers in drug and alcohol detection programs was the subject of lengthy debate. In the final vote, the delegates approved the recommendations, "That TMA support testing of physicians and other health care workers in drug and alcohol detection programs, and that this information be distributed to the Texas Hospital Association, the TMA Hospital Medical Staff Section, and all medical staffs."

Moving to another issue that sparked lengthy and lively debate, the delegates adopted a resolution expressing objections to efforts of The University of Texas Medical Branch to solicit private patients from the Galveston community and its plans to develop satellite clinics in Galveston County. The resolution establishes TMA policy in the future with respect to solicitation of private patients by state-supported and tax-funded medical schools.

The House of Delegates also considered a recommendation asking that TMA endorse Texas Medical Foundation's performance of its review responsibilities under the federal PRO program. The issue drew a standing-room-only crowd to the hearing of the Reference Committee on Government Health Programs, and testimony on that one subject continued for more than an hour. After the hearing, the reference committee recommended, and the delegates agreed:

1. That Texas physicians should cooperate closely with TMF on behalf of their Medicare patients.

2. That there should be further study of the proposal to endorse TMF's review performance under the federal PRO program.

Concurring with a separate recommendation, the delegates endorsed the American Medical Association's efforts to amend the PRO law to afford physicians the right to appeal any PRO's Part B adverse determination by an independent panel of local peers.

The delegates also approved recom-

C. Lincoln Williston, center, and Mrs Williston greet well-wishers during a reception honoring Mr Williston, who retired Dec 31 from his position as TMA's executive director. The reception took place at the Austin Hyatt Regency, Friday, Nov 21, in conjunction with the meeting of the association's House of Delegates.

mendations for altering the Medical Practice Act to address failures and inadequacies in medical discipline and peer review. The Reference Committee on Legislation reported lengthy testimony in support of the proposals, noting that there was concern about the concept of mandatory reporting and the provision of civil immunity to alternate delivery systems, particularly HMOs, PPOs, and review organizations formed pursuant to state or federal law when focusing on cost instead of quality issues. The report was referred to the Council on Legislation for consideration, with emphasis on the stated concerns.

In other actions, the House of Delegates:

1. Approved the Board of Trustees' recommendation against TMA's involvement in a statewide physician-directed health care delivery system.

2. Agreed that TMA should support legislation to (a) ensure school bus safety, (b) develop an office in the Texas Department of Health to serve as a repository for information and education on human tissue and organs for transplantation, (c) strengthen state laws dealing with driving while intoxicated, and (d) retain physicians' ability to receive or provide complimentary pharmaceutical samples.

3. Agreed to investigate the sources of directors' and officers' insurance for county medical societies and medical specialty societies for the protection of their executive committees.

4. Adopted the American College of Sports Medicine's position deploring the use of anabolic-androgenic steroids by athletes.

5. Endorsed the concept of a state insurance pool to provide health insurance coverage for Texans who are uninsurable because they have chronic illnesses.

6. Supported reforms in the administration of Medicare and Medicaid, including limiting the authority of the Secretary of Health and Human Services to set physicians' fees for Medicare services that he finds "inherently unreasonable," repealing the requirement that physicians accept assignment under Medicare for laboratory procedures performed in the office, and creating more realistic Medicare and Medicaid regulations vis a vis the delivery of medical and health services in rural and isolated areas.

House selects Dr Ainsworth to receive award in May

Texas Medical Association's House of Delegates has selected Joseph T. Ainsworth, MD, Houston, to receive the association's highest honor, the Distinguished Service Award. Dr Ainsworth will receive the award during the 1987 Annual Session next May in Houston.

Dr Ainsworth joined the staff of The University of Texas Cancer System, M.D. Anderson Hospital and Tumor Institute in 1977, and currently serves as vice-president for patient care. Before his association with the institute, he was a family physician in private practice for 28 years.

Dr Ainsworth has taken an active role in organized medicine. At the state level, he has been a member and chairman of the Council on Legislation, a member and chairman of the Council on Public Relations, and a member of the Committee on Workers' Compensation and Occupational Medicine. He also has served as a delegate and alternate delegate to the American Medical Association and as chairman of the AMA Council on Legislation. His community activities include the presidency of the Houston Livestock Show and Rodeo.

Board establishes lectureship in honor of Philip R. Overton

In tribute to a friend of the profession, who is recognized as an eminent authority in legal medicine and health care legislation, Texas Medical Association's Board of Trustees has established the Philip R. Overton Annual Lectureship in Medicine and the Law.

The lectureship will be presented each year as part of the association's annual session or during the fall or winter conference. A leading authority will present the address on a timely medical legal subject or on health care legislation.

Mr Overton was first associated with TMA in 1939 when he assisted in preparing an amendment to the Medical Practice Act of Texas. He served as general counsel to the association from 1945 until 1976. He wrote more medical and health bills in this state than any other individual. Listed to his credit are the Sanitary Code of Texas, the original Narcotic Act and amendments, the Dangerous Drug Act, and the Tuberculosis Code.

A report to the board of trustees noted, "(Phil Overton's) contributions over the years have been legendary. His advice and counsel to the association's leadership and to a host of individual physicians have been invaluable. His hallmarks have been his integrity, his dedication to medicine, and his stand for principle."

Dr Brame delivers good news to House of Delegates

"Undoubtedly, our association's greatest achievement during the past year was the formation of the Texas Civil Justice League," Texas Medical Association President Jim Bob Brame, MD, Eldorado, told the House of Delegates. The league is a coalition of businesses and professional and civic organizations, which was organized to promote tort reform during the 70th Texas Legislature. Addressing the delegates during their meeting Nov 21–22, in Austin, Dr Brame also predicted, ". . . we have our best opportunity in ten years to pass meaningful tort reform."

Dr Brame's assessment of the tort reform situation was just one subject of "good news" that he delivered to the delegates. In his address, he set aside problems to concentrate on his theme, "There really is a lot of good news."

He began by noting that TMA's membership has reached a new high of 26,272; the association has a solid financial standing; and almost 1,000 TMA members are members of the House of Delegates and boards, councils, and committees.

He also pointed to the expiration of the freeze on Medicare fees, and the provision of a 3.2% update in Medicare reimbursement for physicians' services. The list of positive accomplishments also included the adoption of favorable rules for preferred provider organizations (PPOs) and TMA's decision to provide assistance to physician-directed health care delivery systems. Dr Brame applauded the Report of the Committee on Manpower, which "will provide solid guidelines for the Texas legislature when it convenes in January."

He concluded by observing, "The year

1987 will be a challenge for those of us in medicine. Fortunately, we have a strong, active, aggressive association. You can count on us—and we are counting on you—to carry the flag for Texas medicine."

Dr Goodman to direct Division of Medical Economics

Louis J. Goodman, PhD, Chicago, will join the Texas Medical Association staff as director of the Division of Medical Economics, formerly the Division of Socioeconomics, in mid-January. The division will be restructured to include departments of health care delivery, health care financing, and socioeconomic research.

From 1974 to 1985, Dr Goodman was an executive staff member with the American Medical Association, serving as director of the departments of statistical analysis, health care financing and organization, and health care review. He also worked as assistant vice-president, corporate ventures and marketing, for Michael Reese Hospital and Medical Center, Chicago.

Louis J. Goodman, PhD, Chicago, joins the staff of the Texas Medical Association in mid-January. He has accepted an appointment as director of TMA's Division of Medical Economics (formerly the Division of Socioeconomics).

A native of New Jersey, Dr Goodman was graduated from New York University with a bachelor of science degree in management science, a master of public administration degree in environmental health administration, and a doctoral degree in health services administration, organization theory, and medical economics.

Dr Goodman and his wife Joann are the parents of two daughters, ages 8 and 5.

HEALTH LINE

Cleft palate group establishes hotline

The American Cleft Palate Educational Foundation has instituted a 24-hour toll-free cleft hotline. By dialing 800–24–CLEFT, callers are referred to local treatment teams and parent support organizations.

The exact causes of clefts are not known, but evidence suggests that several environmental agents, some diseases, and a genetic predisposition are associated with clefting.

The American Cleft Palate Association and its Educational Foundation are comprised of teams of plastic and reconstructive surgeons, dentists, pediatricians, nurses, speech and hearing specialists, otolaryngologists, and other professionals who specialize in the treatment of clefting.

Award recognizes innovative medical devices

Pfizer Hospital Products Group is offering a $50,000 award to recognize recent, promising innovations in the field of hospital products and new modalities in treatment made possible by medical devices. The award recognizes an individual or research team for excellence in medical device innovation at an early stage of development. It is intended to encourage research and development of innovative medical devices to manage and treat diseases.

"An outside panel of experts will judge the scientific merit of the invention, and its benefit to patients," said George Flouty, MD, medical director of Pfizer Hospital Products Group. "Also evaluated will be the practical application of the invention and its possible impact on the quality of health care."

The deadline for applications is Jan 30, 1987, and the award recipient will be announced in May 1987. Application information may be obtained by writing to George Flouty, MD, Pfizer Hospital Products Group, 235 E 42nd St, New York, NY 10017, ATTN: Award for Innovation.

Pediatric reference book available from AAP

The American Academy of Pediatrics *Report of the Committee on Infectious Diseases*, commonly known as the *Pediatric Red Book*, 1986 edition, is now available. A reference for health care professionals desiring the latest information on children's communicable diseases, the 1986 edition includes information on current guidelines on AIDS, infection control in day care centers, and updated sections on *Hemophilus influenzae b* vaccine and varicella zoster immune globulin. Copies are $25 and can be ordered from the American Academy of Pediatrics, Publications Department, 141 Northwest Point Blvd, PO Box 927, Elk Grove Village, IL 60007.

SOCIOECONOMICS

Blues consider new contract: alternative to PPOs, HMOs

At press time, Blue Cross and Blue Shield of Texas was seeking approval from the State Board of Insurance to offer physicians contracts that represent a competitive alternative to preferred provider organizations and health maintenance organizations.

A physician who signed the contract as drafted would agree to accept the Blues' determination of a "reasonable charge" for covered services as the full amount due and payable for those services. The physician would agree to charge no more

IT'S ALL THE COVERAGE THAT YOU WILL EVER NEED!

NEW BENEFITS

COST OF LIVING GUARDIAN
This optional benefit provides a schedule that increases monthly claim payments for total or partial disability to cope with inflation.

INCREASING PRE-DISABILITY BASE EARNINGS
Automatically increases base amount on each anniversary of partial disability to prevent erosion of claim payments should earnings while partially disabled increase due to inflation.

$ ***WAITING PERIOD FOR PARTIAL DISABILITY***
The waiting period for partial disability is now the same as the waiting period you select for total disability, 30, 90 or 180 days.

$ ***PARTIAL DISABILITY BENEFITS***
Benefits becoming due are payable at 50 percent of your monthly benefit for total disability until the long term payment schedule applies at the seventh month.

$ ***INNOVATIVE SOCIAL "SUBSTITUTE"***
A $1000 monthly benefit is available under TMA's low cost, 180 day waiting period to members who want insurance payment as a substitute if a disability does not qualify for Social Security disability payments. The $1000 is payable even if payments are made by Social Security.

"THE TRIED AND TRUE"

Bonafide long term benefit periods for total disability, to age 70.

Long term benefits for partial disability, at no additional cost.

Definition of disability protects you at your medical specialty, at no additional cost.

$ You may be insured for the maximum monthly benefit, up to $8000, regardless of other disability insurance you have in force.

$ At time of claim, the full TMA monthly benefit is paid regardless of monies you may receive from other disability policies, salary continuation, investments, Social Security.

Refer to the "Center Section" of the TMA Insurance Brochure dated August, 1986 for examples. If you do not have a brochure, call 1-800 252-9318.

TEXAS MEDICAL ASSOCIATION INSURANCE PROGRAM
1901 NORTH LAMAR BLVD • AUSTIN, TEXAS 78705
underwritten by
PRUCO LIFE INSURANCE COMPANY of TEXAS
a subsidiary of the PRUDENTIAL

for covered benefits than he or she usually bills other patients for the same services. However, the doctor could bill the insured patient for any difference between the "reasonable charge" and the payment by the Blues, such as deductibles, coinsurance, and those services that are not covered in the insurance policy.

In turn, for those physicians who voluntarily sign agreements, Blue Cross and Blue Shield would agree to remit timely payments for covered services directly to the physician. The insurance company would agree to update reasonable charge files, at least annually, as determined by the Blues. The Blues also would publish annually a listing of physicians who have signed payment plan agreements. The published list and a toll-free telephone number would enable insured patients to identify contracting physicians.

TMA's General Counsel Donald P. (Rocky) Wilcox has reviewed the contract, and observed that, "Each physician would have to compare his or her charges to the BC/BS 'reasonable charge' determinations in order to evaluate the offered contract. Advantages to BC/BS include being able to offer an alternative to its insureds that would assist them in determining what their medical costs will be prior to treatment without imposing burdensome HMO/PPO-type conditions on both physicians and patients. Payments for physicians' services would be made at the same level whether or not the physician signed the agreement."

TMA offers 120 workshops for 5,000 attendees during 1986

Setting a new record, TMA offered 120 practice management workshops in 1986, with attendance approaching 5,000. The association presented 80 workshops in 1985 and 60 in 1984.

Physicians accounted for more than 1,000 of the 5,000 attendees during 1986. Office staff and others accounted for almost 3,000 attendees, and the remainder were spouses of doctors.

At press time, almost 100 workshops in 13 subject areas had been scheduled for presentation in 1987. New topics on tap for the year are medical office management and how to run a more profitable practice. Scheduled for February are workshops on "Insurance Claims Preparation, Coding and Documentation" and "How to Improve Your Third-Party Reimbursement."

Further information on TMA's practice management workshops is available in the *Texas Medicine* "Continuing Education Directory," on page 106 of this issue, or from the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

House rejects development of statewide delivery system

Based on the recommendation of an ad hoc committee of the Executive Board, the Texas Medical Association has rejected the possibility of developing a statewide physician-directed health care delivery system.

The ad hoc committee, chaired by David Vanderpool, MD, Dallas, noted that a survey of TMA members clearly reflects that a majority are not willing to provide financial support. The delegates approved the ad hoc committee's recommendation that TMA provide assistance, rather than compete with, physician-directed plans at the local level.

A Texas Medical Association staff report shows that there are six physician-operated alternate care delivery systems in operation in the state and at least five other physician groups are planning or considering such operations.

The plans currently in operation include:

1. The Central Texas Health Plan (CTHP), an enterprise of the Travis County Medical Society. The plan has 86,000 members in Austin, San Antonio, and Temple. CTHP recently has encountered widely publicized financial problems with losses reported at more than $3 million in a period of 15 months.

2. Greater Houston Physicians, an independent practitioners association with approximately 750 physician subscribers. The group has a health maintenance organization application pending with the State Board of Insurance.

3. The Gulf Coast IPA, which became operational in October 1986. It has 1,400 physician subscribers in the greater Houston-Galveston area.

4. The East Texas Health Plan, a not-for-profit IPA, with 10,588 members. The plan has been in operation in Tyler since March 1985.

5. The Panhandle Provider Organization, an entity of Northwest Texas and St Anthony's hospitals. A preferred provider organization, the plan is beginning to market its services in Amarillo.

6. The Southwest Health Plan, a for-profit IPA initiated by physicians at Baylor Medical Center, Dallas, with 6,055 members.

Clinic and hospital groups with operational HMOs include the Scott and White Health Plan, which has been providing services since 1983 and has 35,000 members. And, Kelsey-Seybold Clinic in Houston has formed Maxicare Texas, Inc, which has 98,000 subscribers.

Five other physician-directed plans are being considered. Three physician-directed HMOs are being explored in the Rio Grande Valley. The Dallas County Medical Society has created Physicians of North Texas, an open panel IPA with a management agreement with Charter Med. A decision is expected shortly as to whether it will become operational. The Taylor-Jones-Haskell County Medical Society has elected a board to investigate the feasibility of a physician-directed plan to serve the people of that area.

CAPITAL COMMENTS

President signs S 1744 despite immunization provision

President Reagan has signed into law S 1744, the Health Care Quality Improvement Act of 1986, which was the last item passed during the 99th Session of Congress. The American Medical Association and other supporters of the legislation had feared a Presidential veto since some members of the administration opposed a provision allowing compensation for children and families of children who have been injured as a result of participating in compulsory childhood immunization programs. No funding has been authorized for the no-fault vaccine program. The President signed the legis-

Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 5BB-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the origina hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics, therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur, they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. S68S

1. Hopkinson JH III. *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med*, 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

© 1986, BASF K&F Corporation 5768/9-86 Printed in U.S.A.

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

lation Nov 14, one day before it would have died as a result of a "pocket veto."

In all, the bill comprises nine titles. One title grants antitrust immunity for peer review activities. Those involved in qualified peer review will be immune from damages under both state and federal laws under certain circumstances. Many states now provide such immunity, and the concept has been upheld legally in several important court decisions. The provisions are not as strong as initially drafted and carry procedural obligations, according to the American Medical Association. However, James H. Sammons, MD, executive vice-president of the American Medical Association, has endorsed the provisions, predicting that they will encourage legitimate peer review without shielding improper anticompetitive behavior.

Dr Sammons criticized an additional provision, which authorizes the Department of Health and Human Services to establish a clearinghouse for disciplinary and professional liability payment information on medical care providers. He pointed out that the latter provision would result in a costly duplication because the necessary information on medical care providers already is available through the AMA physician masterfile.

Another major title, the Drug Export Amendments Act of 1986, allows the export of drugs that have been approved overseas, but are pending approval by the Food and Drug Administration. The package also reauthorizes the federal certification program for health maintenance organizations and for a federal grant program to states, which will enable them to coordinate services for people who suffer from chronic mental illness.

Other titles provide incentives to encourage the training of health care professionals in the treatment of Alzheimer's disease; to fund research for Alzheimer's disease; to establish a National Commission to Prevent Infant Mortality; to increase legal protection for physician pee review activities; and to repeal health planning statutory language in the Public Health Services Act.

NEWSMAKERS

CHARLES M. GAITZ, MD, medical director of the geropsychiatry program at AMI Houston Psychiatric Center, has been named recipient of the Joseph T. Freeman Award, which is presented annually by the Gerontological Society of America. A specialist in psychiatry and geropsychiatry, Dr Gaitz has practiced in Houston since 1952.

LEETE JACKSON, III, DDS, MD, has been elected to the board of directors of the American Board of Oral and Maxillofacial Surgery. Dr Jackson is a private practitioner in Dallas with teaching responsibilities in the oral and maxillofacial surgery residency training programs at both Baylor and Parkland hospitals.

WILLIAM DAVID MCINNIS, MD, San Antonio, was elected assistant secretary of the American Society of Plastic and Reconstructive Surgeons during the society's annual meeting. Dr McInnis is assistant clinical professor for the department of plastic surgery at The University of Texas Health Science Center at San Antonio and chief of the division of plastic surgery for Southwest Texas Methodist Hospital.

WILLIAM W. SCHUESSLER, MD, was one of seven El Paso residents named winners of the "El Paso Together Awards," given for distinguished community service. Dr Schuessler is a past president of the El Paso Chamber of Commerce and the El Paso County Medical Society. He received the National Humanitarian Award from the National Jewish Hospital and Research Center in 1980, and in 1981, was named recipient of the nation's highest civilian award, the Patriotic Service Award, given by the US Secretary of State.

BERNHARD T. MITTEMEYER, MD, formerly US Army surgeon general and senior vice president and corporate medical director of Whittaker Health Services in Los Angeles, has been appointed executive vice president of the Texas Tech University Health Sciences Center. "Dr Mittemeyer is widely known for his views on the role and responsibility of the physician in health care leadership management and peer review," said Texas Tech President Lauro F. Cavazos. "He also is recognized for his understanding of the role of the entire health care team in quality assurance, appropriate utilization of resources, and concurrent review and risk management."

KENNETH M. NUGENT, MD, has been appointed head of the pulmonary division at Texas Tech University Health Sciences Center. Dr Nugent formerly was an associate professor of medicine and medical director of respiratory therapy at The University of Texas Health Center in Tyler.

S. RICHARD ROSKOS, MD, has been appointed clinical director of Green Oaks, a psychiatric hospital in Dallas. Dr Roskos has served as director of adult services at the hospital since 1984.

FRITZ BARTON, MD, Dallas, was chosen to receive the 1986 Taittinger Award of Distinction given by the Susan G. Komen Foundation for the Advancement of Breast Cancer Research. Dr Barton, professor and chairman of the division of plastic surgery at The University of Texas Health Science Center at Dallas, was honored for his role in helping women with breast cancer overcome the emotional and physical consequences of the disease.

William David McInnis, MD

J. THOMAS HUTTON, MD, PHD

Evaluation and treatment of dementia

J. Thomas Hutton, MD, PhD, Texas Tech Alzheimer's Center, Texas Tech School of Medicine, and Lubbock Veterans Administration Outpatient Clinic. Send reprint requests to Dr Hutton at the Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

Dementia is reaching epidemic proportions in our nation. This symptom complex results from more than 60 different medical disorders. The principal form is Alzheimer's disease, which now is recognized as a progressive neurological disease of unknown cause and no longer is defined by an arbitrary age of onset. Clinical diagnosis, if conservatively assigned, can accurately identify Alzheimer's disease in a high percentage of cases confirmed by pathological evaluation. Accepted clinical criteria for the assignment of this diagnosis are reviewed along with recommended clinical assessments that will identify underlying, specifically treatable forms of dementing illness. Available and experimental pharmacological agents and management strategies are discussed.

Dementia is a decline in cognitive, intellectual, and memory functions due to disease processes affecting the central nervous system (1). The symptom complex of dementia causes serious problems with social and functional adaptation and can result from a variety of disease processes. In a time of restricted health care dollars, the question inevitably arises as to whether it is cost effective to subject an elderly person with a dementia syndrome to a medical evaluation that may identify a treatable cause. This article addresses the likelihood of discovering an underlying, potentially remediable medical disorder and the outcome of therapy in these instances.

A second question arises as to the accuracy of the clinical diagnosis of Alzheimer's disease. The assignment of the clinical diagnosis of Alzheimer's disease has increased dramatically during the past decade. A 1978 survey of the clinical diagnoses for 2,872 elderly, institutionalized patients found that 92% of the patients received a diagnosis of organic brain syndrome with arteriosclerosis (2). A similar survey of some 10,000 residents in Texas nursing homes in 1985 revealed that 45% were classified as having Alzheimer's disease (3). The dramatic change in the frequency of clinically diagnosed Alzheimer's disease during the past decade signals a willingness of clinicians to assign this diagnosis. Does this mean that the clinical diagnosis of Alzheimer's disease, once largely overlooked, is now overused and indiscriminately assigned? This article reviews criteria for the assignment of the clinical diagnosis of Alzheimer's disease. Although this disorder is incurable, inaccurate clinical diagnosis leads to poor prognostication and inappropriate therapy, and severely jeopardizes concurrent research efforts.

Changing terminology

The term "dementia" has been variously defined over the years and at times was abandoned in favor of the term "organic or chronic brain syndrome." The reemergence of the term in the DSM-III demonstrates the resilience of the term. Dementia is now understood to refer to an acquired constellation of behavioral symptoms, generally occurring in the older age groups, that is secondary to brain dysfunction. In the advanced state, the behavioral deficits occur in memory, orientation, judgment, intellectual function, and affect.

The major nosological changes relating to dementia have to do with the manner in which the principal form of dementing illness, Alzheimer's disease, is defined. Alois Alzheimer in 1907 originally described the clinical and neuropathological findings in a 51-year-old woman whose dementia progressed to a severe state over a period of five years (4). Following her death, Alzheimer carried out a thorough examination of the brain. He determined that the brain was atrophic and that the cortex contained many microscopic lesions. By using the Bielschowsky method of silver impregnation, he discovered a curious clumping of the cortical neurofilaments which is referred to as neurofibrillary degeneration. He also described senile (neuritic) plaques, the second hallmark of the disease.

Alois Alzheimer was impressed with the severity of the neuropathological abnormalities and especially by the young age of onset. He believed that this case represented a presenile onset of what was then recognized as senile dementia. In 1910 Kraepelin coined the term Alzheimer's disease to honor his student Alzheimer and to label this presenile onset form of dementia (5).

For the next 68 years, Alzheimer's disease was distinguished from the usual form of senile dementia by the arbitrary age of onset. Alzheimer's disease was characterized by the neuropathological findings plus an early onset that was variously said to be prior to age 50 (6), age 60 (7) or age 65 (8–10). In the late 1970s numerous investigators began to question the arbitrary dichotomy between Alzheimer's disease and senile dementia (11–13). Whereas no pathological or invariable clinical differences appeared to exist between the early and late onset cases, the term "Alzheimer's disease" was broadened to encompass the spectrum regardless of age of onset. The immediate result of this nosological revision was an apparent, twentyfold increase in the incidence of Alzheimer's disease. In more recent years, most scientific publications have shortened the term to *Alzheimer* disease, but for this article we have selected the commonly used *Alzheimer's* disease.

Clinical diagnosis and Alzheimer's disease: criteria and accuracy

Over the past decade Alzheimer's disease has been diagnosed with increasing frequency. Patients may be diagnosed as having "presumed Alzheimer's disease" or "probable Alzheimer's disease" in tacit recognition that the pathologist makes the final diagnostic determination. Nevertheless, the awareness has grown that the accuracy of clinical diagnosis can approximate that of pathological diagnosis.

Alzheimer's disease is clinically defined by its insidious onset and progressive course. It typically affects memory early, followed by visuo-spatial functions and other cognitive processes. Usually language, with the exception of word finding, is spared until late in the course of the disorder. Focal neurologic signs are absent in contrast to multi-infarct dementia and to dementia resulting from mass lesions. The level of consciousness is intact and stable in distinction to typical encephalopathies resulting from metabolic, toxic, or endocrine disturbances. In addition to these inclusion criteria, a patient must undergo a screening evaluation to exclude alternative causes of dementia.

Whereas no blood test or x-ray confirmation of the diagnosis of Alzheimer's disease exists, apprehension may exist over missing some underlying more treatable cause for the dementia syndrome. Series of clinically diagnosed Alzheimer's disease have been compared to eventual postmortem diagnosis. The accuracy of the clinical diagnosis has varied from 55% to 82% (11,14,15).

Our own experience as part of a National Institute on Aging sponsored study on the epidemiology of Alzheimer's disease revealed that of 17 clinically diagnosed cases of Alzheimer's disease that eventually came to autopsy, 16 (94%) were confirmed pathologically as having Alzheimer's disease. Our series, which reached a clinical diagnosis of Alzheimer's disease in 92 cases, used conservative diagnosis and included prospective follow-up of patients. With follow-up some patients (11) were withdrawn because they showed no progressive dementia or because an alternative explanation for the dementia syndrome was discovered. The benefit of longitudinal follow-up for improving the diagnostic accuracy has been noted by others (16,17).

Outcome of medical evaluation for dementia

Several clinical series have shown that evaluations of patients presenting with dementia syndromes successfully identify 10% to 20% as having an underlying medical disorder for which treatment is currently available (18–22). These studies also reveal that more than 60 disorders can give rise to dementia syndromes. An increased likelihood of finding a specifically treatable disorder is associated with shorter duration of symptoms, focal neurologic signs, and fluctuating level of consciousness—but not with increasing age (23).

The most common categories of specifically treatable disease are metabolic, toxic, endocrine, space occupying lesions, functional psychiatric, and occult hydrocephalus (23). Fig 1 outlines useful and recommended procedures for evaluation of demented patients. These treatable diagnoses require careful histories which generally must be taken from relatives or other close informants. Complete physical and neurological examinations are useful in identifying systemic disease or focal neurologic signs. A laboratory evaluation is helpful and should consist of a complete blood count, a sedimentation rate, a biochemical screen including measures of glucose, kidney, and liver function, vitamin B12 and folate levels, thyroid profile, and a test for neurosyphilis. Screens for toxins may be required if indicated based on historical findings (24). Cerebrospinal fluid examination may demonstrate fungal meningoencephalitis. Scinticisternograms may be carried out by intrathecal injection of radionucleotide and may demonstrate altered cerebrospinal fluid dynamics suggestive of occult hydrocephalus. This test, however, is a poor predictor of favorable response to neurosurgical shunting procedures (24).

Brain imaging either by CT-scanning or magnetic resonance imaging (MRI) should be carried out in all patients with dementia. Such scanning is the best way to demonstrate mass lesions and strokes. Also, caudate nucleus atrophy indicative of Huntington's disease or atrophy limited to the anterior portions of the brain indicative of Pick's disease may be demonstrated. While CT-scanning misses at least half of lacunar infarctions, MRI may be too sensitive. MRI may identify areas of periventricular leucoencephalopathy in normal, healthy aged persons that cannot be differentiated from lacunar state (24). The CT-scan may also demonstrate cerebral atrophy in older persons in the absence of a dementia syndrome. Despite the chance of false-positive diagnoses, CT-scanning or MRI should be carried out as most large clinical series would have failed to diag-

1. Evaluation of the demented patient.

1. Careful history, generally taken from relative
2. General physical and neurological examination including mental status examination
3. CT scan or MRI scan of head
4. Electroencephalogram
5. Chest roentgenogram
6. Metabolic screen, thyroid profile, complete blood count, urinalysis, syphilis test, electrolytes, B12 level, folate level, sedimentation rate

Additional studies if clinically indicated:
1. Lumbar puncture
2. Scinticisternogram
3. Toxicity screening
4. Neuropsychological testing

nose treatable underlying diseases without the use of brain imaging. Electroencephalography plays a limited but confirmatory role in the evaluation of patients with dementia. It is the most useful test for diagnosing rare ictal dementia. In these instances it shows diffuse and continuous epileptiform activity. It may demonstrate periodic complexes useful in the diagnosis of Creutzfeldt-Jakob disease or triphasic waves suggestive of hepatic or uremic encephalopathy. It may play a role in differentiating pseudodementia of depression from true dementia, in that the former is associated with a normal EEG (25).

In the current environment of diagnosis-related groups, the usefulness of dementia evaluations from time to time is questioned. In economic terms, if two patients out of 100 are identified to have a "treatable" dementia and can be spared institutionalization for several years, then dementia evaluations are warranted (24). This does not take into account the important benefits to patient, family, and society in recognizing treatable forms of dementia and instituting therapy.

Therapy

In the 20% to 30% of patients for whom a discoverable medical condition exists, treatment approaches are straightforward. Shunting of cerebrospinal fluid in hydrocephalus, removal of subdural hematomas, B12 for pernicious anemia, thyroid replacement for hypothyroidism, antibiotic therapy for neurosyphilis or fungal meningoencephalitides, and avoidance of offending toxic agents are examples of specific treatment. In addition, there are ways to stabilize dementia, such as removal of embolic sources or medical therapy (antiplatelet aggregating agents or anticoagulation) in multi-infarct dementia and alcohol treatment programs for patients with alcoholic dementia. Even if a specifically treatable condition cannot be identified, the provision of a diagnosis, prognosis, and emotional support contributes valuable information to the patient and family.

For the remaining 80% to 90% in which no specific treatment is known, various pharmacological and management strategies may be of benefit. The pathogeneses of Alzheimer's and Pick's diseases and the dementia of Parkinson's disease are unknown, which prevents the development of rational pharmacologic approaches to treatment. Nevertheless, empirical treatments have been used and will be briefly reviewed. An excellent review of this topic has recently been published (26).

CEREBRAL VASODILATORS

The rationale for the use of cerebral vasodilators suffered seriously when it was shown that most dementias were not the result of "hardening of the arteries" and that on average no increase in arteriosclerosis was found in brains of demented persons as compared to age-matched brains (27). Papaverine is a potent but nonspecific smooth muscle relaxant that has been shown to increase cerebral blood flow (28). Only one clinical trial claimed practical benefit from papaverine whereas six of nine double-blind studies in dementia found improvements in psychometric scores (29). Cyclandelate also relaxes smooth muscle of arterioles and increases cerebral blood flow. Three of seven controlled studies reported practical benefits from treatment with cyclandelate while the other four found it to be no better than placebo (29). One crossover study of a year's duration found that cyclandelate arrested decline in performance while not producing improvement (30). These contradietory and largely unimpressive results suggest the efficacy of cyclandelate is limited at best (26). Other vasodilators include isoxsuprine, betahistine, vincamine, and cinnarizine. None of these agents have been shown in controlled studies to have any practical benefits.

CEREBRAL METABOLIC ENHANCERS

These agents are believed to work by enhancing neuronal metabolism. The best studied and most widely used agent for the treatment of dementia is dihydroergotoxine (DHE). Twenty-one double-blind clinical studies were carried out comparing DHE to placebo or papaverine. These studies were analyzed retrospectively (31). Five factors consisting of cognitive function, interpersonal relationships, affective disorders, apathy, and somatic functioning were derived from an 18-item clinical scale. Significant improvements at three months were found in the idiopathic-degenerative group for all five factors and in four of five factors (interpersonal relationships were unchanged) in the vascular dementia group. Improvements of equal magnitude said to be of clinical significance were found at one year. DHE-related improvement may be related to alleviation of depression as reported improvements are most apparent in symptoms associated with depression such as emotional withdrawal, depressive mood, and motor retardation (32). This suggests the possibility that at least some of the reported benefit of DHE may be because of an antidepressant effect. Nafronyl increases brain utilization of glucose and oxygen in experimental animals (33). Eight studies in Europe and one double-blind study in the USA reported positive findings. These improvements were present in the overall Impairment Index but were not significant for individual clinical rating measures.

CHOLINERGIC AGENTS

Initial enthusiasm for precursor loading for acetyl-

choline has waned. Following numerous reports that the major enzymes involved in the synthesis of acetylcholine in brains with Alzheimer's disease were markedly reduced, a number of studies were carried out that gave either choline or lecithin to Alzheimer's patients. These studies were almost uniformly disappointing. Attempts have been carried out to decrease the hydrolysis of acetylcholine by using centrally acting anticholinesterase agents (physostigmine and tetrahydroaminoacridine). Very limited clinical improvement was found with physostigmine (34), although EEG improvements have been noted (35).

A recent clinical trial of tetrahydroaminoacridine (THA) reported very encouraging results (36). In this study 17 patients with moderate to severe Alzheimer's disease were treated in a three-phase study. The first phase consisted of an open label, dose-finding study. Significant improvement was found as compared to pretreatment status. A second phase which consisted of a double-blind, crossover study using a placebo control resulted in a significant advantage for the THA treatment over the placebo. The third phase involved treatment with THA for an average of 12.6 months and resulted in symptomatic improvements without any significant side effects. This study has understandably been greeted with considerable enthusiasm. Replication of these results is needed. Nevertheless, this study is encouraging as THA may be to Alzheimer's disease what L-dopa has been to Parkinson's disease (36).

NOOTROPICS

Nootropic agents are defined as selectively enhancing higher cerebral functions. They are believed to act on the association areas of the brain. The best studied nootropic is piracetam. It has been shown to increase the ATP/ADP ratio in the brain. While statistically significant improvements with piracetam treatment have been demonstrated in healthy normal patients and in animals, clinical trials in elderly and demented subjects have had mixed results (37). Newer nootropics are being developed.

NEUROPEPTIDES

These compounds are currently being investigated for possible therapeutic benefit. These agents act either as neurotransmitters or neuromodulators. In a double-blind, crossover study vasopressin improved memory retrieval and increased arousal (38). ACTH analogues may bring about mood elevation and mild improvement in memory (38).

PSYCHOSTIMULANTS

After some initial enthusiasm from open label studies, results of psychostimulants in the treatment of demented patients have been unimpressive. The most widely studied agent in this class is pentylenetetrazol. It failed to bring about clinical improvement in most studies (39). Stimulant medications may have a limited role in the occasional demented patient who has reduced level of consciousness; however, when given to individuals with normal levels of consciousness, it typically only increases the rate of confusion.

TRANQUILIZERS

Aggressive outbursts and hallucinatory behavior may occur with Alzheimer's disease. When behavioral management proves ineffective for controlling violent behavior, small doses of a tranquilizer may be useful. The tranquilizers are effective in reducing visual hallucinations. Commonly used agents include thioridazine, haloperidol, chlorpromazine, or benzodiazepine agents.

EMOTIONAL SUPPORT AND COUNSELING

Perhaps the most impressive intervention that the physician can undertake at this time is counseling of the family members of the demented patient. Advice with regard to controlling incontinence (scheduled voidings, external catheters, or diapers), wandering (safety devices on doors), dangerous driving (licensure rechecks or immobilization of vehicle), and feedings (limited distraction and adequate allotment of time) is often helpful to the caregivers. Also counseling with regard to institutionalization and referral to community support groups or services can be quite meaningful. An excellent book written by Dr Peter Rabins and Nancy Mace, *The 36-Hour Day*, provides tips on many problems encountered by caregivers of Alzheimer's patients. Although verbal communication with severely demented patients may prove impossible, nonverbal communication remains as intact as in nondemented persons (40). A soothing voice and gentle touch from the physician may do far more good than imagined.

REFERENCES

1. Spitzer RL, Skodol AE, Gibbon M, et al: DSM-III Case Book: A Learning Companion to the Diagnostic and Statistical Manual of Mental Disorders, ed 3. Washington, DC, American Psychiatric Association, 1981.
2. Liss L, Lowry OJ: The incidence of Alzheimer's disease in institutionalized patients. Age: The Journal of the American Aging Association 1(4):163.
3. Craig M: Alzheimer's disease initiative nursing home study. Tex Dept of Health, July 1985.
4. Alzheimer A: Über Eigenartige Erkrankung der Hirnrinde. Psychiat 64:146–148, 1907.
5. Kraepelin E: Psychiatric Eighth Edition. Leipzig, Barth, 2:1, 1910.
6. Stedman TL: Medical Dictionary, a Vocabulary of Medicine and its Allied Sciences, with Pronunciations and Derivations, ed 21, Asimov I (ed). Baltimore, Williams and Wilkins, 1966, p 457.
7. Noyes AP: Modern Clinical Psychiatry, ed 7, Kolb

I.C (ed). Philadelphia, WB Saunders Company, 1968, p 282.

8. Shelanski ML: The aging brain: Alzheimer's disease and senile dementia, in Ostfeld AM, Gibson DC (eds): Epidemiology of Aging: Summary Report and Selective Papers from a Research Conference. Bethesda, Md, US Dept of Health, Education, and Welfare, DHEW publication No. (NIH) 75–711, 1972, pp 113–127.

9. Sourander P, Sjogren H: The concept of Alzheimer's disease and its clinical implications, in Wolstenholme GEW, O'Connor M (eds): Alzheimer's Disease and Related Conditions. A Ciba Foundation Symposium. London, Churchill, 1970, pp 11–36.

10. Wang HS: Dementia of old age, in Smith WL, Kinsbourne M (eds): Aging and Dementia. New York, Spectrum, 1977, pp 1–24.

11. Constantinidis J: Is Alzheimer's disease a major form of senile dementia? in Katzman R, Terry RD, Bick KL (eds): Alzheimer's Disease: Senile Dementia and Related Disorders (Aging, vol 7). New York, Raven Press, 1978, pp 15–25.

12. Neumann MA, Cohn R: Epidemiological approach to questions of identity of Alzheimer's and senile brain disease: a proposal, in Katzman R, Terry RD, Bick KL (eds): Alzheimer's Disease: Senile Dementia and Related Disorders (Aging, vol 7). New York, Raven Press, 1978, pp 27–34.

13. Grufferman S: Alzheimer's disease and senile dementia: one disease or two? in Katzman R, Terry RD, Bick KL (eds): Alzheimer's Disease: Senile Dementia and Related Disorders (Aging, vol 7). New York, Raven Press, 1978, pp 35–41.

14. Sulkava R, Haltia M, Paetau A, et al: Accuracy of clinical diagnosis in primary degenerative dementia: correlation with neuropathological findings. J Neurol Neurosurg Psychiatry 46(1):9–13, 1983.

15. Todorov AB, Go RC, Constantinidis J, et al: Specificity of the clinical diagnosis of dementia. J Neurol Sci 26(1):81–98, 1975.

16. Shore D, Overman CA, Whatt RJ: Improving accuracy in the diagnosis of Alzheimer's disease. J Clin Psychiatry 44(6):207–212, 1983.

17. Ron MA, Toone BK, Garralda ME, et al: Diagnostic accuracy in presenile dementia. Br J Psychiatry 134: 161–168, 1979.

18. Marsden CD, Harrison MJ: Outcome of investigation of patients with presenile dementia. Br Med J 2(808): 249–252, 1972.

19. Freemon FR: Evaluation of patients with progressive intellectual deterioration. Arch Neurol 33(9):658–659, 1976.

20. Katzman R: Diagnostic evaluation and treatment in dementia, in Wells CE (ed): Dementia. Philadelphia, Davis, pp 336–351.

21. Smith JS, Kiloh LG, Ratnavale GS, et al: The investigation of dementia. Med J Aust 2:403–405, 1976.

22. Hutton JT: Senility reconsidered (letter). JAMA 245(10):1025–1026, 1981.

23. Hutton JT: Results of clinical assessment for the dementia syndrome: implications for epidemiologic studies, in Mortimer JA, Schuman LM (eds): The Epidemiology of Dementia. New York, Oxford University Press, 1981, pp 62–69.

24. Katzman R: Differential diagnosis of dementing illnesses. Neurol Clin 4(2):329–340, 1986.

25. Torres F, Hutton JT: Clinical neurophysiology of dementia. Neurol Clin 4(2):369–386, 1986.

26. Klawans HL, Genovese N: Pharmacology of dementia. Neurol Clin 4(2):459–467, 1986.

27. Tomlinson BE, Blessed G, Roth M: Observations on the brains of demented old people. J Neurol Sci 11(3): 205–242, 1970.

28. Cook P, James I: Cerebral vasodilators. N Engl J Med 305(26):1508–1513, 1560–1564, 1981.

29. Yesavage JA, Tinklenberg JR, Hollister LE, et al: Vasodilators in senile dementias: a review of the literature. Arch Gen Psychiatry 36(2):220–223, 1979.

30. Young J, Hall P, Blakemore C: Treatment of the cerebral manifestations of arteriosclerosis with cyclandelate. Br J Psychiatry 124(579):177–180, 1974.

31. Fanchamps A: Dihydroergotoxine in senile cerebral insufficiency, in Agnoli A (ed): Aging, vol 23: Aging Brain and Ergot Alkaloids. New York, pp 311–322, 1983.

32. Roubicek J, Geiger C, Abt K: An ergot alkaloid preparation (Hydergine) in geriatric therapy. J Am Geriatr Soc 20(5):222–229, 1972.

33. Branconnier RJ: The efficacy of the cerebral metabolic enhancers in the treatment of senile dementia. Psychopharmacol Bull 19(2):212–219, 1983.

34. Davis KL, Mohs RC, Davis BM, et al: Oral physostigmine in Alzheimer's disease. Psychopharmacol Bull 19(3):451–453, 1983.

35. Agnoli A, Martucci N, Manna V, et al: Effect of cholinergic and anticholinergic drugs on short-term memory in Alzheimer's dementia: A neuropsychological and computerized electroencephalographic study. Clin Neuropharmacol 6(4):311–323, 1983.

36. Summers WK, Majovski LV, Marsh GM, et al: Oral tetrahydroaminoacridine in long-term treatment of senile dementia, Alzheimer-type. N Engl J Med 315:1241–1245, 1986.

37. Ferris SH: Empirical studies in senile dementia with central nervous system stimulants and metabolic enhancers, in Crook T, Gershon S (eds): Strategies for the Development of an Effective Treatment for Senile Dementia. New Canaan, Conn, M. Powley, 1981, pp 173–187.

38. Ferris SH: Neuropeptides in the treatment of Alzheimer's disease, in Reisberg B (ed): Alzheimer Disease. New York, Free Press, 1983, pp 369–372.

39. Lehman HE, Ban TA: Central nervous system stimulants and anabolic substances in geropsychiatric therapy, in Gershon S, Raskin A (eds): Aging, vol 2. New York, Raven Press, 1975, pp 179–202.

40. Hoffman SB, Platt CA, Barry KE, et al: When language fails: nonverbal communication abilities of the demented, in Hutton JT, Kenny AD: Senile dementia of the Alzheimer type: proceedings of the Fifth Tarbox Symposium, the Norman Rockwell Conference on Alzheimer's Disease, Lubbock, Tex. New York, Liss, 1985, pp 49–64.

YOU DON'T OFFER A WRITTEN GUARANTEE UNLESS YOU HAVE THE BEST COMPUTER SYSTEM.

Introducing the Reynolds and Reynolds Pledge of Satisfaction.

Reynolds+Reynolds

Pledge of Satisfaction

Our system will perform the tasks required to help your practice run more profitably and efficiently or your full system price will be refunded.

Before we decided to offer your practice a written guarantee, we made sure we had the best medical practice management system on the market.

Only Reynolds + Reynolds, a Fortune 500 company with over 20 years of computer experience as a single source supplier, offers you:

- State-of-the-art hardware from IBM, NCR, and Texas Instruments.
- The most comprehensive Unix-based medical practice management software in the industry.
- MPMS-PLUS software features:
  - appointment scheduling
  - patient billing
  - accounts receivable
  - insurance claims
  - management reports.
- The industry's most responsive after-sale hardware and software service and support.
- Competitive lease plan rates.
- A full line of computer forms.
- A unique written pledge of satisfaction assuring you that our system will perform the tasks required to help your practice run more profitably and efficiently or your full system price will be refunded.

Whether you're a new buyer or a dissatisfied system user, Reynolds + Reynolds' single source concept is right for you. Interested? To know more about our MPMS-Plus System and our Pledge of Satisfaction, fill out the attached coupon or call us toll-free at 1-800-632-4278 (in Ohio call 1-800-535-7128.)

Reynolds+Reynolds®
Committed To Your Future

P.O. Box 1005
Dayton, OH 45401

Yes, I'm interested! I want to know more about the Reynolds + Reynolds® MPMS-PLUS system. To make our first discussion more efficient, I've filled in the information requested below.

I'm considering automating my practice:

☐ Right away. ☐ In six months. ☐ In a year or so.

☐ I'd like to know more about your unique Pledge of Satisfaction.

Name: _____

Practice Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

# of Physicians: ____ Specialty: _____

SAMUEL D. BRINKMAN, PHD

JOHN W. LARGEN, JR, PHD

Strategies for the pharmacological treatment of Alzheimer's disease

Samuel D. Brinkman, PhD, Neuropsychology Clinic, Abilene, Tex, and John W. Largen, Jr, PhD, Kelsey-Seybold Clinic, Houston, Tex. Send reprint requests to Dr Brinkman, Neuropsychology Clinic, 1500 Industrial, Suite 204, Abilene, TX 79602.

The search for effective pharmacological treatments for Alzheimer's disease has been frustrating. Initial excitement about new approaches has usually not been supported by subsequent studies, and even when treatment effects have been noted, the magnitude of the therapeutic response has been disappointing. While memory impairment occurs in virtually every case of Alzheimer's disease, the frequency and severity of various other symptoms are not so consistent. The variability of initial presentation and progression of the disease suggest that there may be subtypes of the disease.

Many types of pharmacological agents have been studied in elderly individuals who have memory and intellectual impairments. Central nervous system stimulants have been of some use in increasing socialization, affect, and behavior in some institutionalized elderly individuals (1) but have not improved memory or other cognitive abilities (1,2).

Under the assumption that most demented elderly individuals suffered from cerebral arteriosclerosis, cerebral vasodilators were evaluated in a large number of clinical trials (3). This class of drugs has met with disappointing results, primarily because most elderly individuals who have irreversible memory and intellectual impairments are found at autopsy to have Alzheimer's disease (AD) without significant evidence of cerebrovascular disease (eg, 4). Even in cases of cerebrovascular insufficiency there is no evidence that ischemic regions of the brain would benefit from increased blood flow. For similar reasons, hyperbaric oxygenation has not been successful in treating patients with AD (5). The widespread investigation of vasodilators and hyperbaric oxygenation, however, had two beneficial effects on subsequent treatment studies. First, greater effort has been made to identify and treat patients earlier in the course of deterioration. Second, these studies have led to greater emphasis on accurate diagnosis in patients who are admitted to drug studies.

The dehydrated ergot alkaloid (DHE), marketed as Hydergine, initially was classified as a vasodilator and has limited therapeutic benefits for patients with AD. Therapeutic effects have usually not been seen until nearly two months of treatment in most studies (6–11). Hydergine, therefore, may be effective in reducing the rate of progression of symptoms in AD relative to controls, rather than actually reversing deficits.

The primary mode of action of Hydergine is thought to be enhanced cerebral metabolism (12). This observation has led to increased interest in nootropic agents. The most widely investigated nootropic agent is piracetam, a derivative of gamma aminobutyric acid (GABA). Piracetam is thought to enhance metabolism by increasing synthesis of adenosine triphosphate in brain (13). It may also enhance release of acetylcholine (ACh) in the hippocampus (14). Therapeutic effects have not been found in mildly impaired patients (15–17). Combination treatments with both piracetam and choline have also been disappointing.

More recently, researchers have become interested in the use of neuropeptides to enhance memory and attentional processes in AD. Although lacking a theoretical basis, the observation that some neuropeptides may enhance learning/memory in laboratory animals (18–21) has led to their investigation in humans. ACTH analogues may have mild effects on attention and some aspects of memory in humans (22–24). Vasopressin has been studied more extensively in humans, but results have been inconsistent (25–27).

Cholinergic treatments

Only a limited number of approaches are available to enhance central cholinergic activity in clinical studies. Precursor loading with choline salts or lecithin has been uniformly disappointing (28–33). In spite of a wide range of doses, variable lengths of treatment, various degrees of impairment in subjects, individual titration of doses, and a wide range of outcome measures, there is no acceptable evidence that choline salts or lecithin improves memory or other cognitive processes in AD.

Three other approaches to increasing central cholinergic activity have been attempted: inhibition of acetylcholine esterase (AChE), thereby prolonging the action of ACh on the post-synaptic receptor; direct stimulation of the post-synaptic muscarinic cholinergic receptor; and combination treatments. Combination treatments have involved either AChE inhibition with precursor loading, or the nootropic agent piracetam with precursor loading.

Clinical trials with these pharmacological strategies are difficult because of the short half-life of substances such as physostigmine and arecoline and because of the necessity of regulating the peripheral effects of these substances by postsynaptic receptor blocking agents which do not cross the blood-brain barrier.

With respect to physostigmine and tetrahydroaminoacridine (THA), the most widely used AChE inhibitors, it is clear that enhanced central cholinergic neurotransmission can improve learning and memory in young healthy adults (34–36). Similarly, the centrally active muscarinic agonist arccoline has been found to enhance memory and learning in young adults (37). Consistent with these findings, administration of muscarinic antagonists scopolamine or atropine inhibits memory processes

n young adults (37–39). Scopolamine-induced memory dysfunction in young adults is not reversed by methylphenidate but improves following administration of physostigmine (40).

Clinical trials of AChE inhibitors or muscarinic agonists in AD are equivocal (34,39,41–48). A growing interest exists in oral physostigmine or oral THA in the treatment of AD (42,49–51).

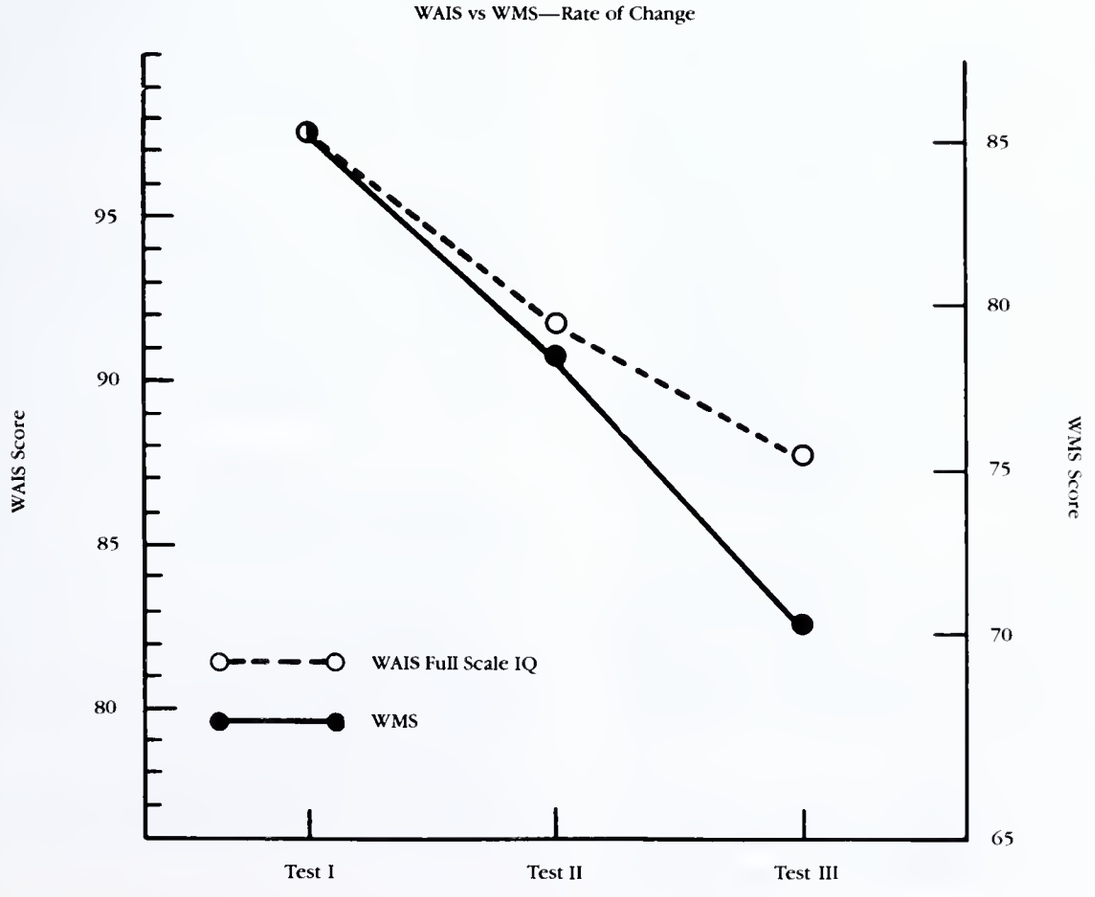
Several studies have reported positive results with combined precursor and AChE inhibition treatment (eg, 46,51), but results have not been universally positive (42). The combination of piracetam and precursor loading, which is supported by animal research (52), may have some therapeutic potential for AD patients (53,54).

The methodological difficulties in these types of studies have been reviewed elsewhere (34). The studies are technically difficult. Positive and negative results must be reviewed with this in mind.

Clinical characteristics of AD

The clinical symptoms of autopsy-verified AD are quite variable (55). There is general agreement that memory impairments occur in virtually every case. The frequency of other symptoms, such as aphasia, dyspraxia, or deficits in abstract reasoning, is not well established. Deficits in primary sensory or motor processes (such as hemiparesis, hemianopsia, or hemisensory deficit) are not seen in pure AD, although deficits in the processing of sensory information (agnosia) are common.

The neuropsychological impairments of AD have been the targets for treatment. These impairments may be seen in a number of areas: memory dysfunction, deficits in abstract reasoning and concept formation, disturbance of attention and concentration, disturbance of language and language-based processes, dyspraxia, and personality and emotional changes. Some patients have marked memory impairments with only mild declines in the other areas of neuropsychological functioning. Other patients may have dramatic deficits in abstract reasoning, constructional praxis, and language functioning as well as memory deficits. One would suspect that there may be different patterns of neuropathology or neurotransmitter change in these two types of patient. There is preliminary evidence, for example, that patients with dramatic visual-spatial deficits early in the course of the disease may be more responsive to cholinergic drugs (56). In general, psychopharmacological investigations have treated these two types of patients equally, thereby making



1 Comparison of changes in Wechsler Adult Intelligence Scale (WAIS) full scale IQ and Wechsler Memory Scale (WMS) memory quotient over approximately 2 1/2 years in ten patients with dementia of the Alzheimer type.

it more difficult to establish the efficacy of drugs that may be therapeutic for one type of patient but not for the other.

Fig 1 reflects the mean full scale IQ scores from the Wechsler Adult Intelligence Scale (57) and the memory quotient (MQ) from the Wechsler Memory Scale (WMS) (58) from a group of ten slowly progressing patients evaluated at three different time points. The initial mean age was 65.2 ± 5.9 years (seven females and three males). Mean duration of symptoms was 3.7 ± 2.6 years. The time from the first to the second assessment was an average of 13.8 ± 2.6 months, and the time from the second to the third assessment was 18.6 ± 2.9 months.

As seen in the figure, the group had significantly lower WMS MQ scores at the outset of the study, reflecting the early prominence of memory impairments. The MQ scores continued to decline more rapidly than the IQ scores. Because of the marked variability in the rate of decline of IQ scores, the mean changes in full scale IQ, from an initial value of 97.0 ± 13.7 to a mean of 87.3 ± 24.3 at the third assessment, were not statistically significant. The MQ scores, on the other hand, continued to decline at a statistically significant rate, from an initial mean of 85.3 ± 16.3 to a final mean of 70.2 ± 14.1.

Since these patients were selected on the basis of their ability to participate in three assessments over a 2.5- to 3-year period, the group is not truly representative of patients with AD. They probably are a more slowly progressing subset of patients who have remained otherwise healthy. Two conclusions, however, appear warranted. First, the variability in rate of decline of the full scale IQ (reflective of a wide range of praxic, visual-spatial, and verbal skills with relatively little memory component) is so great in this slowly progressing group that statistically significant changes may wash out. Second, reductions in performance on the Wechsler Memory Scale are greater than reductions in nonmemory performance and are noted more reliably across patients. Unfortunately, we are currently unable to predict the rate of progression or periods of relative stabilization. Such prediction, however, is fundamentally important to drug studies that evaluate efficacy.

The search for a characteristic pattern of symptoms in AD is compromised by the progressive nature of the disease. Patients vary widely in the rate and nature of the progression. Some patients appear to reach plateaus, or periods of relative stabilization, and these periods of stabilization are associated with little change in computerized tomographic scanning (59).

This variability in initial clinical presentation, rate of progression, and nature of progression raises the issue of potential subtypes of AD. Although clinical subtypes can be characterized, the relationship of subtypes to underlying neuropathology and changes in neurotransmitter systems is unclear.

Conclusions

The current research emphasis is on symptomatic treatments. In other words, drugs are selected for clinical evaluation on the basis of their hypothesized ability to reverse, stabilize, or retard the progression of neuropsychological impairments. There is inadequate information about the causes of AD to develop etiologically based treatments. There has been considerable interest in centrally active cholinergic drugs because of the marked disruption in cholinergic neurotransmission in the brains of AD. Precursor loading with lecithin or choline in salt form has produced disappointing results. AChE inhibitors and muscarinic agonists are of potential value, as they are apparently able to produce small improvements in patients suspected of having AD. Combination of precursor loading and either piracetam or AChE inhibitors may be of some use.

One of the greatest obstacles in the development of symptomatic treatments is the lack of understanding of the symptoms. Patients with AD are markedly different from one another in terms of the nature and breadth of early symptoms, rate of progression, and qualitative characteristics of progression. Although there is growing discussion of subtypes of AD that may require different pharmacological treatment approaches, the relationship between potential subtypes and the neuropathological or neuropharmacological aspects of the disease may prove difficult to elucidate.

REFERENCES

1. Lehmann HE, Ban TA: Central nervous system stimulants and anabolic substances in geropsychiatric therapy, in Gershon S, Raskin A (eds): Aging, Vol 2. Genesis and Treatment of Psychologic Disorders in the Elderly. New York, Raven Press, 1975.

2. Crook T, Ferris S, Sathananthan G, et al: The effect of methylphenidate on test performance in the cognitively impaired aged. Psychopharmacology 52(3):251–255, 1977.

3. Sathananthan GL, Gershon S: Cerebral vasodilators: a review, in Gershon S, Raskin A (eds): Aging, Vol 2. Genesis and Treatment of Psychologic Disorders in the Elderly. New York, Raven Press, 1975.

4. Tomlinson BE, Blessed G, Roth M: Observations on the brains of non-demented old people. J Neurol Sci 7(2):331–356, 1968.

5. Thompson LW: Effects of hyperbaric oxygen on behavioral functioning in elderly patients with intellectual impairment, in Gershon S, Raskin A (eds): Aging, Vol 2. Genesis and Treatment of Psychologic Disorders in the Elderly. New York, Raven Press, 1975.

6. Rao DB, Norris JR: A double-blind investigation of hydergine in the treatment of cerebrovascular insufficiency in the elderly. Johns Hopkins Med J 130(5):317–324, 1972.

7. Ditch M, Kelly FJ, Resnick O: An ergot preparation (hydergine) in the treatment of cerebrovascular disorders in the geriatric patient: a double-blind study. J Am Geriatr Soc 19(3):208–217, 1971.

8. Triboletti F, Ferri H: Hydergine for treatment of symptoms of cerebrovascular insufficiency. Curr Ther Res 11(10):609–620, 1969.

9. Banen DM: An ergot preparation (hydergine) for relief of symptoms of cerebrovascular insufficiency. J Am Geriatr Soc 20(1):22–24, 1972.

10. Jennings WG: An ergot alkaloid preparation (hydergine) versus placebo for treatment of symptoms of cerebrovascular insufficiency: double-blind study. J Am Geriatr Soc 20(8):407–412, 1972.

11. Bazo AJ: An ergot alkaloid preparation (hydergine) versus papaverine in treating common complaints of the aged: double-blind study. J Am Geriatr Soc 21(2):63–71, 1973.

12. Emmenegger H, Meier-Ruge W: The actions of Hydergine on the brain. A histochemical, circulatory and neurophysiological study. Pharmacology 1(1):65–78, 1968.

13. Gobert JG: Genesis of a drug: Piracetam. Metabolism and biochemical research. J Pharm Belg 26(3):281–304, 1972.

14. Wurtman RJ, Magil SG, Reinstein DK: Piracetam diminishes hippocampal acetylcholine levels in rats. Life Sci 28(10):1091–1093, 1981.

15. Rosenberg GS, Greenwald B, Davis KL: Pharmacologic treatment of Alzheimer's disease: an overview, in Reisberg B (ed): Alzheimer's Disease. New York, Free Press, 1983.

16. Ferris SH: Empirical studies in senile dementia with central nervous system stimulants and metabolic enhancers, in Crook T, Gershon S (eds): Strategies for the Development of an Effective Treatment for Senile Dementia. New Canaan, Conn, M. Powley, 1981.

17. Ferris SW, Reisberg B, Crook T, et al: Pharmacologic treatment of senile dementia: choline, L-dopa, piracetam, and choline/piracetam. Aging NY 19:475–481, 1982.

18. Beekwith BE, Sandman CA: Behavioral influences of the neuropeptides ACTH and MSH: a methodological review. Neurosci Bio Behav Rev 2:311–338, 1978.

19. de Wied D: Pituitary-adrenal system hormones and behavior, in Schmitt FO, Worden FG (eds): The Neurosciences. Cambridge, Mass, MIT Press, 1973.

20. de Wied D: Peptides and behavior. Life Sci 20(2): 195–204, 1977.

21. van Wimersma Greidanus TB, de Wied D: The physiology of the neurohypophysical system and its relation to memory processes, in Davison AN (ed): Biochemical Correlates of Brain Structure and Function. New York, Academic Press, 1977.

22. Ferris S, Reisberg B, Gershon S: Neuropeptide modulation of cognition and memory in humans, in Poon LW (ed): Aging in the 1980s—psychological issues. Washington, DC, American Psychological Association, 1980.

23. Pigache RM, Rigter H: Effects of peptides related to ACTH on mood and vigilance in man, in van Wimersma Greidanus T, Rees LH (eds): Frontiers of Hormone Research, vol 8. Basel, S. Karger, 1981.

24. Ferris SH: Neuropeptides in the treatment of Alzheimer's disease, in Reisberg B (ed): Alzheimer's Disease. New York, Free Press, 1983.

25. Taminga CA, Durso R, Fedio P, et al: Vasopressin studies in Alzheimer's disease. Annual meeting, New Clinical Drug Evaluation Unit, Key Biscayne, May 27, 1981.

26. Tinklenberg JR, Peabody CA, Berger PA: Vasopressin effects on cognition and affect in the elderly, in Ordy JM, Sladek JR, Reisberg B (eds): Neuropeptide and Hormone Modulation of Brain Function and Homeostasis. New York, Raven Press, 1983.

27. Weingartner H, Gold P, Ballenger JC, et al: Effects of vasopressin on human memory function. Science 211(4482):601–603, 1981.

28. Bartus RT, Dean RL 3d, Beer B, et al: The cholinergic hypothesis of geriatric memory dysfunction. Science 217(4558):408–414, 1982.

29. Brinkman SD, Smith RC, Meyer JS, et al: Lecithin and memory training in suspected Alzheimer's disease. J Gerontol 37(1):4–9, 1982.

30. Brinkman SD, Pomara N, Goodnick PJ et al: A dose-ranging study of lecithin in the treatment of primary degenerative dementia (Alzheimer's disease). J Clin Psychopharmacol 2(4):281–285, 1982.

31. Etienne P, Dastoor D, Gauthier S, et al: Alzheimer disease: lack of effect of lecithin treatment for 3 months. Neurology 31(12):1552–1554, 1981.

32. Ferris SH, Sathananthan G, Reisberg B, et al: Long-term choline treatment of memory-impaired elderly patients. Science 205(4410):1039–1040, 1979.

33. Fovall P, Dysken MW, Davis JM: Treatment of Alzheimer's disease with choline salts, in Reisberg B (ed): Alzheimer's Disease. New York, Free Press, 1983.

34. Brinkman SD, Gershon S: Measurement of cholinergic drug effects on memory in Alzheimer's disease. Neurobiol Aging 4(2):139–145, 1983.

35. Davis KL, Mohs RC, Tinklenberg JR, et al: Physostigmine: improvement of long-term memory processes in normal humans. Science 201(4352):272–274, 1978.

36. Davis KL, Hollister LE, Overall J, et al: Physostigmine: effects on cognition and affect in normal subjects. Psychopharmacology 51(1):23–27, 1976.

37. Sitaram N, Weingartner H, Gillin JC: Human serial learning: enhancement with arecholine and choline impairment with scopolamine. Science 201(4352):274–276, 1978.

38. Petersen RC: Scopolamine induced learning failures in man. Psychopharmacology 52(3):283–289, 1977.

39. Delwaide PJ, Devoitille JM, Ylieff M: Acute effect of drugs upon memory of patients with senile dementia. Acta Psychiatr Belg 80(5):748–754, 1980.

40. Drachman DA: Memory and the cholinergic system, in Fields WS (ed): Neurotransmitter Function. New York, Stratton International, 1977.

41. Ashford JW, Soldinger S, Schaeffer J, et al: Physostigmine and its effect on six patients with dementia. Am J Psychiatry 138(6):829–830, 1981.

42. Wettstein A: No effect from double-blind trial of physostigmine and lecithin in Alzheimer disease. Ann Neurol 13(2):210–212, 1983.

43. Christie JE, Shering A, Ferguson J, et al: Physostigmine and arecoline: effects of intravenous infusions in Alzheimer presenile dementia. Br J Psychiatry 138:46–50, 1981.

44. Mohs RC, Davis KL: A signal detectability analysis of the effect of physostigmine on memory in patients with Alzheimer's disease. Neurobiol Aging 3(2):105–110, 1982.

45. Muramoto O, Sugishita M, Sugita H, et al: Effect of physostigmine on constructional and memory tasks in Alzheimer's disease. Arch Neurol 36(8):501–503, 1979.

46. Peters BH, Levin HS: Effects of physostigmine and lecithin on memory in Alzheimer disease. Ann Neurol 6(3):219–221, 1979.

47. Smith CM, Swash M: Physostigmine in Alzheimer's disease, letter. Lancet 1(8106):42, 1979.

48. Summers WK, Viesselman JO, Marsh GM, et al: Use of THA in treatment of Alzheimer-like dementia: pilot study in twelve patients. Biol Psychiatry 16(2):145–153, 1981.

49. Davis KL, Mohs RC, Rosen WG, et al: Memory enhancement with oral physostigmine in Alzheimer's disease, letter. N Engl J Med 308:721, 1983.

50. Kaye WH, Sitaram N, Weingartner H, et al: Modest facilitation of memory in dementia with combined lecithin and anticholinerestase treatment. Biol Psychiatry 17(2): 275–280, 1982.

51. Thal LJ, Fuld PA: Memory enchancement with oral physostigmine in Alzheimer's disease, letter. N Engl J Med 308:720, 1983.

52. Bartus RT, Dean RL: Age-related memory loss and drug therapy: possible directions based on animal models, in Enna SJ, Samorajski T, Beer B (eds): Brain Neurotransmitters and Receptors in Aging and Age-Related Disorders. New York, Raven Press, 1981.

53. Reisberg B, Ferris SH, Schneck MK, et al: Piracetam in the treatment of cognitive impairment in the elderly. Drug Devel Res 2:475–480, 1982.

54. Vroulis GA, Johnson R, Morgan R, et al: Neuropsychological and pharmacological evidence of subtypes in Alzheimer's disease, abstract. J Clin Exp Neuropsychol 7:621, 1985.

55. Brun A, Gustafson L: Distribution of cerebral degeneration in Alzheimer's disease. A clinico-pathological study. Arch Psychiatr Nervenkr 223(1):15–33, 1976.

56. Liston EH: The clinical phenomenology of presenile dementia. A critical review of the literature. J Nerv Ment Dis 167(6):329–336, 1979.

57. Albert MS: Cognitive heterogeneity among mildly impaired patients with Alzheimer's type dementia, abstract. J Clin Exp Neuropsychol 7:611, 1985.

58. Wechsler D: Manual for the Wechsler Adult Intelligence Scale. New York, Psychological Corp, 1955.

59. Wechsler D: Manual: Wechsler Memory Scale. New York, Psychological Corp, 1945.

60. Brinkman SD, Largen JW Jr: Changes in brain ventricular size with repeated CAT scans in suspected Alzheimer's disease. Am J Psychiatry 141(1):81–83, 1984.

The success of our patients is our greatest reward.

At left, Cheryl competing in a wheelchair race in January of 1986 – 6 months after her accident.

At right, Cheryl today – clearly a winner.

When Cheryl Bagert first came to the Touro Rehabilitation Center in August of 1985, she was determined to walk again. And with hard work, the encouragement of her family, and the support of the Touro staff, she was on her feet in less than twelve months.

This year, the National Association of Rehabilitation Facilities has honored Touro by naming the Center the Outstanding Medical Facility in its class. They recognized the Center for staff dedication, exceptional facilities, and the overall design of the program which emphasizes family involvement and gives patients a second chance at a life of independence.

The Touro Rehabilitation Center accepts this award on behalf of Cheryl, and patients like her, who enrich our lives with their courage and strength.

TOURO
INFIRMARY

Touro Rehabilitation Center
1401 Foucher Street
New Orleans, Louisiana 70115
(504) 897-8560

DONALD E. MOSS, PHD

LISA A. RODRIGUEZ, BS

Alzheimer's dementia: recent developments in cholinergic pharmacology

Donald E. Moss, PhD, and Lisa A. Rodriguez, BS, Laboratory of Psychobiochemistry, Department of Psychology, The University of Texas at El Paso, El Paso, TX 79968. Send reprint requests to Dr Moss.

The cholinergic hypothesis of senile dementia of the Alzheimer type is reviewed in the context of being only one part of a complex disease process. Although there is a strong correlation between deterioration in CNS cholinergic function and dementia in Alzheimer's disease and other disorders, the results obtained in clinical trials with various cholinergic drugs have been disappointing. At the present time, anticholinesterase therapy appears to be the most promising strategy for treating the symptom of dementia although the results have been of more theoretical than clinical importance. Some sulfonyl fluorides, new CNS-selective cholinesterase inhibitors, may have therapeutic value in Alzheimer's disease and related dementias associated with reduced CNS cholinergic function. However, it is unlikely that any treatment for Alzheimer's disease will be successful unless the pathophysiology can be arrested in an early stage, while major parts of the CNS are still functional.

Alzheimer's disease (AD) is a complex pathophysiological process that produces gross neuropathology and generalized deterioration of the brain. It has been associated with specific changes in many neurotransmitters including acetylcholine, somatostatin, norepinephrine and dopamine, and various amino acids. It is an oversimplification to characterize AD as an anticholinergic dementia. Even though the disease involves more than deterioration of cholinergic function in the central nervous system (CNS), the cholinergic hypothesis of dementia has dominated this area of clinical and basic research. The rationale for this hypothesis is based on the discovery that indicators of cholinergic neurotransmission are markedly reduced in brains from Alzheimer's disease patients (1) and a significant loss of cholinergic cell bodies occurs in the basal forebrain, including the nucleus basalis of Meynert (2). The degree of dementia and memory impairment that occurs in AD is correlated with the decrement in cortical cholinergic transmission.

Clinical trials have generally shown that precursor therapy with choline or lecithin is almost completely ineffective. The results obtained with direct receptor agonists have been equally disappointing. However, marginal facilitation of memory performance has been obtained in clinical tests with AD patients using physostigmine (3,4), a short-acting cholinesterase inhibitor that crosses the blood-brain barrier and has central as well as peripheral effects. Physostigmine given every 2 hours was used to treat 12 patients with Alzheimer's disease for 3 to 5 days. Of the ten patients who completed the study, three showed significant improvement at the highest dose that could be tolerated. Cortisol measures showed that clinical improvement was correlated with enhanced central cholinergic activity (5). Very encouraging results have been reported in a recent double-blind, placebo-controlled crossover study of tetrahydroaminoacridine given to demented patients for an average of 12 months (6). Tetrahydroaminoacridine is a reversible centrally active cholinesterase inhibitor that was given orally twice per day. The patients showed highly significant sustained improvement on several measures of cognitive performance. These results suggest that cholinesterase inhibitors may have value in long-term palliative treatment of Alzheimer's dementia, although further observation will be required before the clinical impact of this type of therapy can be assessed. At the present time, cholinesterase inhibitor therapy appears to be the most promising approach to treatment of Alzheimer's dementia.

One major problem related to the development of a successful anticholinesterase therapy in AD is the great potential for toxicity. Disturbing and toxic side effects are produced by cholinesterase inhibition in the peripheral nervous system. The development of a CNS-selective cholinesterase inhibitor has been specifically suggested as a method to reduce peripheral toxicity (7). A second approach has been to develop a system for delivery of cholinergic drugs directly into the CNS (8). Another problem is sustaining a therapeutic level of cholinesterase inhibition over a long period of time in the treatment of AD, a chronic disease with a duration of several years. Carbamate cholinesterase inhibitors, such as physostigmine, are inherently unacceptable because of the short duration of the pharmacological effect of these compounds.

New developments in cholinesterase inhibitors

We have undertaken research to develop long-lasting CNS-selective cholinesterase inhibitors that might be suitable for treatment of AD and other CNS diseases in which a decline in cholinergic function may be involved. Some sulfonyl fluorides have been discovered to be very long-lasting CNS-selective cholinesterase inhibitors with remarkably low general toxicity (9,10). Because of these special characteristics, these compounds may have some potential as therapeutic agents in AD and related CNS diseases.

The sulfonyl fluorides that react with cholinesterase are irreversible inhibitors that form a covalent sulfonyl-enzyme complex similar to the phosphonyl-enzyme complex formed by the organic phosphates. The sulfonyl fluorides are generally less reactive than the organic phosphates and this may account for their selectivity. It is also possible that the sulfonyl fluorides, being less reactive, will produce fewer noncholinesterase side effects such as

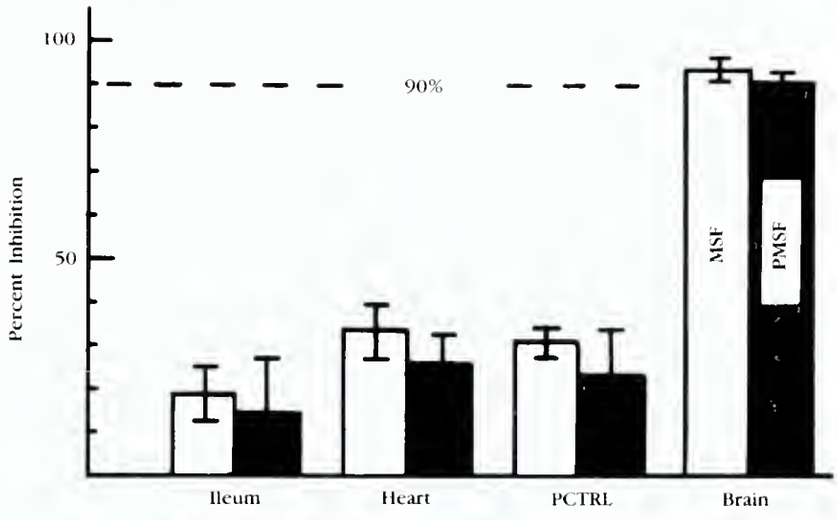
"Ginger Jake" paralysis, a delayed neurotoxic disorder produced by certain organophosphorus anticholinesterase agents in humans.

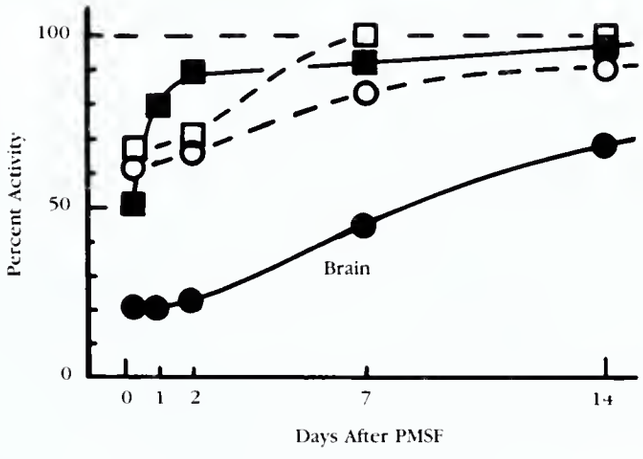
Of the 36 sulfonyl fluorides tested in vivo in rats, only five show significant inhibition. All inhibited brain enzyme to a greater degree than cholinesterases from heart, ileum, and pectoral muscle (9,10). There was no obvious relationship between the molecular structure and activity against cholinesterase (10), and the reason for the selectivity toward the CNS is unknown.

The two inhibitors that have been studied in greatest detail are phenylmethylsulfonyl fluoride (PMSF) and methanesulfonyl fluoride (MSF). Both of these compounds produced an average of 90% inhibition of brain cholinesterase with less than 30% to 35% inhibition of enzyme in peripheral tissues when the drug was administered daily at a low dose (Fig 1). It is important to note that in rats MSF produced this effect at 0.5 mg/kg as compared to 85 mg/kg for PMSF. The difference in biological activity suggests that MSF may be the more clinically useful compound.

The remarkable difference between the central and peripheral effects observed in these experiments is the result of two factors: the inherent selectivity of MSF and PMSF to inhibit CNS enzyme and the relatively slow rate at which CNS enzyme is synthesized. As with recovery from organophosphates, the rates of recovery are limited by the rates of synthesis of new enzyme in each tissue. From Fig 2, the synthesis of new enzyme in brain appears to occur with a mean half-time of approximately 11 days compared to 1, 3, and 6 days for ileum, heart, and pectoralis, respectively.

1. Cholinesterase inhibition in rat ileum, heart, pectoral muscle (PCTRL), and brain produced by five daily administrations of PMSF (85 mg/kg) and MSF (0.5 mg/kg) by gavage. The error bars represent one SEM.





2. Time course of cholinesterase inhibition produced in rats by one injection of PMSF (100 mg/kg) in various tissues. A time point of 4 hours is shown between 0 and 1 day. Ileum is represented by filled squares, heart by open squares, skeletal muscle (pectoralis) by open circles, and brain by filled circles.

Potential for development of therapeutic sulfonyl fluorides

In vital organs, a substantial excess of cholinesterase exists above the amount required for normal function. Less than 50% inhibition is generally regarded as not being pharmacologically significant. Using this figure as a rough guide, direct measurements of enzyme activity show that MSF and PMSF both produce pharmacologically significant CNS cholinesterase inhibition with limited peripheral effects.

However, because AD is a complex disease, anticholinesterase therapy cannot be expected to be sufficient. For example, the best results with anticholinesterase agents may be obtained when they are used with M2 muscarinic receptor antagonists to prevent the M2 receptors on presynaptic membranes from defeating acetylcholine release by feedback inhibition. Similarly, therapeutic effects could be enhanced by an M1 muscarinic receptor agonist to stimulate postsynaptic muscarinic receptors directly. In addition, combining a cholinesterase inhibitor with precursors like choline or lecithin with

nootropic agents may act synergistically to produce significant enhancement of cognitive function. Lastly, of course, anticholinesterase agents will ultimately be successful only as an adjunct to other treatments that effectively stop the progression of the underlying pathophysiology of the disease, preferably early enough so that the CNS cholinergic system would be largely intact.

Conclusion

Despite the strong rational basis and limited experimental support for the cholinergic hypothesis, research in cholinergic pharmacology has not produced an effective long-lasting treatment for AD. Several factors could account for this lack of success. AD is a complex process that involves many neurotransmitter systems. Because of this, it may be that no therapeutic strategy based on one system can be successful. Similarly, the well-documented loss of cholinergic function within the CNS is clearly an epiphenomenon that occurs as a consequence of neuronal death. It is unreasonable to expect any important therapeutic effects to be obtained in AD until reliable early diagnosis is available and the underlying disease process can be arrested while enough of the essential neurotransmitter systems are still responsive to therapeutic interventions.

REFERENCES

1. Davies P, Maloney AJ: Selective loss of central cholinergic neurons in Alzheimer's disease, letter. Lancet 2(8000):1403, 1976.

2. Whitehouse PJ, Price DL, Struble RG, et al: Alzheimer's disease and senile dementia: loss of neurons in the basal forebrain. Science 215(4537):1237–1239, 1982.

3. Brinkman SD, Gershon S: Measurement of cholinergic drug effects on memory in Alzheimer's disease. Neurobiol Aging 4(2):139–145, 1983.

4. Davis KL, Mohs RC: Enhancement of memory processes in Alzheimer's disease with multiple-dose intravenous physostigmine. Am J Psychiatry 139(11):1421–1424, 1982.

5. Mohs RC, Davis BM, Johns CA, et al: Oral physostigmine treatment of patients with Alzheimer's disease. Am J Psychiatry 142(1):28–33, 1985.

6. Summers WK, Majovski LV, Marsh GM, et al: Oral tetrahydroaminoacridine in long-term treatment of senile dementia, Alzheimer-type. N Engl J Med 315:1241–1245, 1986.

7. Davies P: Theoretical treatment possibilities for dementia of the Alzheimer type: the cholinergic hypothesis, in Crook T, Gershon S (eds): Strategies for the Development of an Effective Treatment for Senile Dementia. New Canaan, Conn, M. Powley, 1981, pp 19–34.

8. Harbaugh RE, Roberts DW, Coombs DW, et al: Preliminary report: intracranial cholinergic drug infusion in patients with Alzheimer's disease. Neurosurgery 15(4): 514–518, 1984.

9. Moss DE, Rodriguez LA, Selim S, et al: The sulfonyl fluorides: CNS selective cholinesterase inhibitors with potential value in Alzheimer's disease? in Hutton JT, Kenny AD (eds): Senile Dementia of the Alzheimer Type. New York, Liss, 1985, pp 337–350.

10. Moss DE, Rodriguez LA, Herndon WC, et al: Sulfonyl fluorides as possible therapeutic agents in Alzheimer's Disease: Structure/activity relationships as CNS selective cholinesterase inhibitors, in Fisher A, Hanin I, Lachman C (eds): Alzheimer's and Parkinson's Disease: Strategies for Research and Development. New York, Plenum Press, 1986, pp 551–556.

Motrin® 800 mg TABLETS
ibuprofen

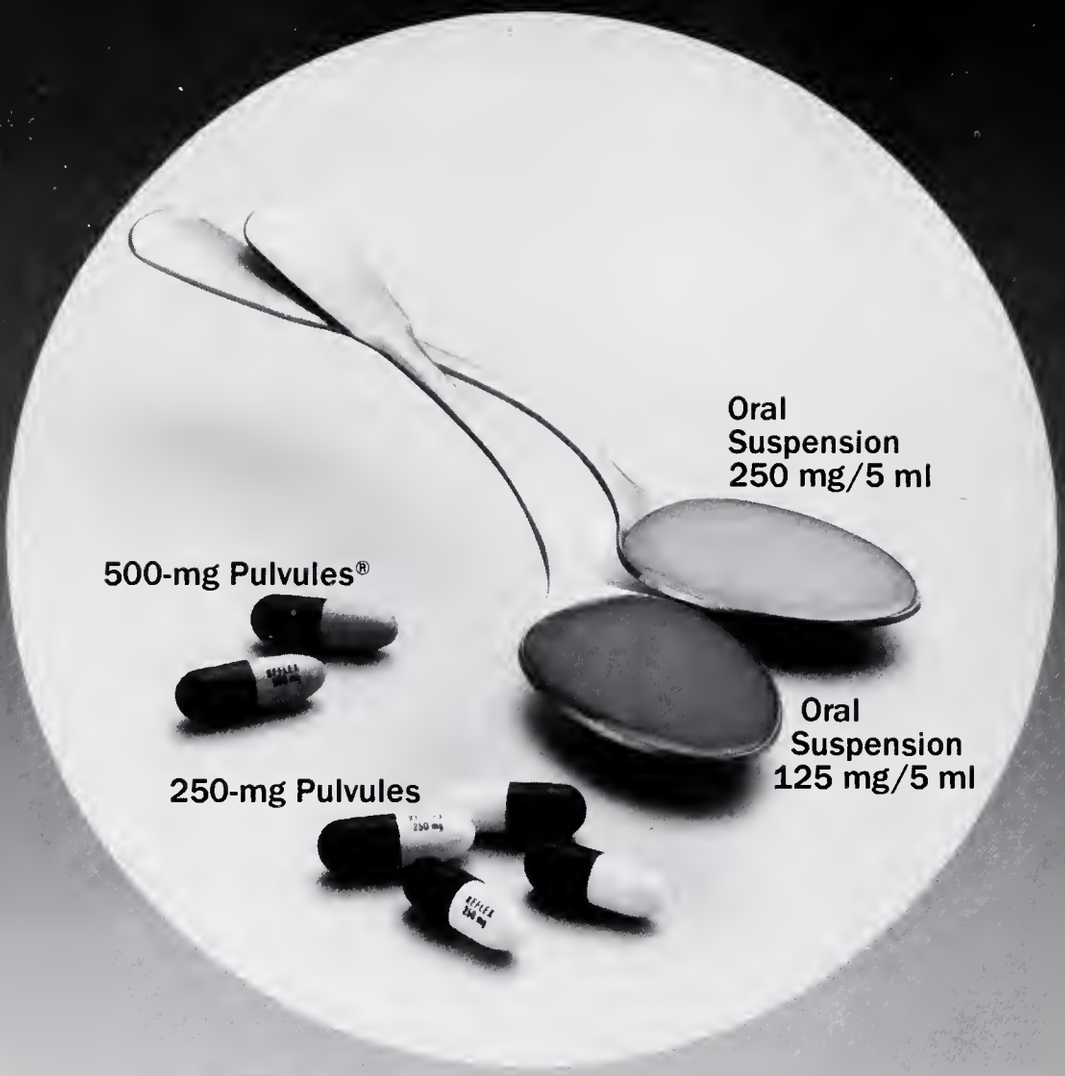
Extra strength
Convenience
Economy

Upjohn
A Century of Caring
1886·1986

©1986 The Upjohn Company

J-6138 January 1986

Easy To Take



Keflex®
cephalexin

Additional information available to the profession on request.

DISTA

420113

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd. by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

GUSTAVO C. ROMÁN, MD

Lacunar dementia: a form of vascular dementia

Lacunar dementia is a relatively common form of vascular dementia resulting not from loss of brain tissue volume owing to large-artery infarctions (multi-infarct dementia), but rather from disconnection of cortex from an ischemic leukoencephalopathy produced by small-artery disease. The patient presents with gait difficulty, urinary incontinence, pseudobulbar palsy, emotional lability, and dementia. Computed tomography (CT) and magnetic resonance imaging (MRI) show periventricular white matter lesions, lacunes, and ventricular dilatation. The identity of lacunar dementia and Binswanger's disease seems warranted.

Vascular dementias represent the second most common cause of dementia in the elderly. Although the term multi-infarct dementia (MID) (1) is generally used to include all vascular forms of dementia resulting from the additive effect of large and small strokes, Tomlinson et al (2) were able to demonstrate that the presence of dementia in MID patients occurs with loss of 50 to 100 ml of cerebral volume, usually as a result of large-artery embolic or occlusive cerebrovascular disease. The "ischemic score" (3) utilized for the clinical diagnosis of MID emphasizes the history of strokes, the abrupt onset of the dementing illness, and the presence of focal neurological signs and symptoms.

Nonetheless, many patients with clinical diagnosis of vascular dementia fail to show extensive cerebral infarcts on routine computed tomography (CT) scan. High-resolution CT scan (4,5) or proton nuclear magnetic resonance imaging (MRI) (6,7), have shown these patients to have low density lesions of the periventricular white matter, ventricular dilatation, and lacunes. This vascular form of dementia is produced by a subcortical ischemic leukoencephalopathy due to small-artery disease, identical to Binswanger's disease (7,8). In contrast with MID, severity of the dementia correlates with the degree of cortical disconnection from the ischemic leukoencephalopathy, and not with the volume of brain tissue losses. The availability of CT and MRI appears to be resulting in an increase in the frequency of clinical diagnosis of this entity (4–7).

Discussion

Vascular forms of dementia account for up to 34% of all clinical patients evaluated for dementia (9). Autopsy studies show that 50% of all demented patients have Alzheimer's disease, 20% have vascular dementia, and 20% a combination of the two (2,10). An ischemic leukoencephalopathy produced by hypertensive small-artery disease has recently been noted in vascular dementia patients. In that lacunes are a constant feature of this vascular form of dementia, the name "lacunar dementia" has been proposed by Román (8,11), to differentiate it from MID. Although lacunes may cause no clinical signs in one third of the patients (12), they can also present clinically in at least 20 well-documented neurological syndromes (13). Dementia in patients with lacunes is well-established (11,12). In a clinicopathological review of 100 patients with autopsy-proven lacunes from the Hôpital de la Salpêtrière in Paris, Román (14,15) found 36 with dementia. Of these, 23 had MID, 7 had mixed Alzheimer's-vaseular dementia, and 6 had Binswanger's disease (LD). In the latter, dementia could not be correlated with the number or the situation of the lacunes; some patients with one or two lacunes had profound dementia, while others with innumerable lacunes had no dementia. A closer correlation seemed to exist with the degree of ventricular dilatation resulting from white matter lesions.

CLINICAL FEATURES

Lacunar dementia usually begins in a patient 50 to 65 years old with a history of hypertension, diabetes, and discrete strokes. The disorder is chronic, leading progressively to dementia with signs of pseudobulbar palsy and pyramidal dysfunction. Moderate to severe disease of the major cerebral arteries is common.

The clinical picture fluctuates, frequently reaching a plateau, or even improving for months or years (16). This is clearly different from Alzheimer's disease. The triad of ataxia, dementia, and incontinence, typical of normal pressure hydrocephalus (NPH), is also observed in lacunar dementia. In contrast, clinical deterioration occurs in less than one year in NPH.

Lacunar dementia presents with predominant features of frontal lobe involvement. Aphasia, amnesia, or parietal neglect occur in a minority of cases. Bilateral pyramidal tract signs, rigidity, mutism, and seizures may occur. Ventricular dilatation is noted in all cases, but shunting provides only transitory improvement.

RADIOLOGICAL DIAGNOSIS

The difficulties in the differential diagnosis of Alzheimer's disease and vascular dementia are well recognized. The CT in lacunar dementia is characterized by ventricular dilatation, with features of non-obstructive hydrocephalus, along with areas of symmetrical, bilateral low-attenuation in the white matter of the periventricular regions (17–19). Lacunar strokes are usually identified in the basal ganglia. White matter lesions are not enhanced by intravenous contrast material and must be differentiated from those of advanced multiple sclerosis, trauma, anoxic leukoencephalopathy, and communicating hydrocephalus with transependymal cere-

Gustavo C. Román, MD, Associate Professor of Neurology and Acting Chairman, Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, School of Medicine, Lubbock, TX 79430.

brospinal fluid (CSF) leakage. MRI shows periventricular hyperintensity in elderly patients (20,22). Zimmerman et al (22) consider that a minimal degree of periventricular hyperintensity (PVH) is a normal finding in MRI. However, the presence of a "halo" of PVH is pathologic. This is a reflection of T-2 relaxation and is usually associated with edema, destruction of hydrophobic myelin, or transependymal CSF reabsorption.

NEUROPATHOLOGY

Correlation studies of the radiological images with the neuropathology (4,17–22) have demonstrated that the low-density images correspond to subcortical areas of ischemic leukoencephalopathy, with demyelination, ischemic necrosis and gliosis, plus arteriosclerotic and hypertensive vasculopathy. In fact, the demyelinating lesions can be considered the result of confluent lacunar infarcts in the periventricular white matter. Lacunes in the usual locations in the basal ganglia (12,13) are also a constant element in neuropathological studies of LD.

PHYSIOPATHOLOGY

Atheromatous obstructions of basal ganglia arteries ranging in size from 400 to 900 μm (13) produce larger lacunes; smaller ones result from occlusion of arteries less than 200 μm in diameter due to hypertensive lipohyalinosis (13). The ischemic leukoencephalopathy of lacunar dementia results from preferential involvement of medullary arteries which supply the periventricular white matter. Cortical arterial branches supply the cortex and the subcortical arcuate U-fibers (23). Large medullary branches penetrate deeply into the subcortical white matter terminating in the walls of the lateral ventricles (23). The latter are end arteries, without terminal anastomosis, anatomically similar to the penetrating arteries of pons and basal ganglia whose occlusion produces lacunes.

The most frequently found periventricular border zones in the human brain are located at 3 to 10 mm from the ventricular wall. De Reuck (23) demonstrated small periventricular infarctions of these areas, not related to vascular occlusion, in 45 brains of elderly patients with cardiovascular disease. The periventricular white matter is, therefore, a watershed territory and constitutes an area of predilection for ischemia. Recently, Ishii et al (24) studied 30 cases of vascular dementia with a lacunar state and correlated the clinical presentation with the postmortem findings. Clinically, these patients presented with prominent frontal signs, small-step gait, dysarthria, urinary incontinence, emotional lability, grasp reflex, paraplegia in flexion, and akinetic mutism.

Pathologic lesions (24) predominated in the periventricular white matter around the anterior horn, and lacunes were found in all cases. In addition, all patients presented incomplete bilateral softening of the periventricular white matter in the frontal and parietal lobes. The subcortical U-fibers were always spared. In moderate cases only the periventricular white matter was affected. Histologically, most lacunes were the result of infarction. Diffuse ischemic lesions of the white matter consisted of incomplete softening of myelin and axons. Extensive fibrosis of the penetrating arteries, as well as hyaline medial and adventitial thickening were present in all cases.

According to Okeda (25), selective narrowing of medullary arteries would predispose to this ischemic leukoencephalopathy. The arcuate U-fibers are spared because they are irrigated by cortical rather than medullary arteries (26). Ventricular dilatation *ex vacuo* results from extensive periventricular softenings. Tohgi (27), in an autopsy study of demented elderly patients in Japan, found a vascular cause in 53% of all cases. Of these vascular dementias, only 18% were MID, while 35% were due to diffuse white matter ischemia. Román (28) reported five cases of LD among 50 demented patients evaluated clinically, while only one patient had MID. Recently, Dougherty et al (29) identified 23 patients with subcortical ischemic leukoencephalopathy, white matter lesions on CT scan, and a halo of PVH on MRI. All patients had cognitive deficits, frontal signs, and gait abnormalities, 13 had low-volume urinary incontinence, 9 had pseudobulbar palsy, and 6 had bradykinesia. Similar cases were also described by Kinkel et al (30).

Conclusion

It appears appropriate to classify vascular dementias in two major categories: (1) multi-infarct dementia, a cortical dementia produced by large-artery disease, mainly atherosclerosis or embolism, resulting in loss of brain volume exceeding 50 ml; and (2) lacunar dementia, or Binswanger's disease due to small-artery disease, mainly arteriolosclerosis from arterial hypertension, resulting in lacunar infarctions of basal ganglia and ischemic leukoencephalopathy of periventricular white matter.

Recognition of the differences in physiopathology, clinical and radiological manifestations of these two vascular forms of dementia should result in better prevention and possible treatment of a substantial number of patients with dementia.

REFERENCES

1. Hachinski VC, Lassen NA, Marshall J: Multi-infarct dementia. A cause of mental deterioration in the elderly. Lancet 2(874):207–210, 1974.

2. Tomlinson BE, Blessed G, Roth M: Observations on the brains of non-demented old people. J Neurol Sci 7(2):331–356, 1968.

3. Rosen WG, Terry RD, Fuld PA, et al: Pathological verification of ischemic score in differentiation of dementias. Ann Neurol 7(5):486–488, 1980.

4. Goto K, Ishii N, Fukasawa H: Diffuse white-matter disease in the geriatric population. A clinical, neuropathological, and CT study. Radiology 141(3):687–695, 1981.

5. Pullicino P, Eskin T, Ketonen L: Prevalence of Binswanger's disease (Letter). Lancet 1(8330):939, 1983.

6. Besson JA, Corrigan FM, Foreman EI, et al: Differentiating senile dementia of Alzheimer type and multi-infarct dementia by proton NMR imaging (Letter). Lancet 2(8353):789, 1983.

7. Erkinjuntti T, Sipponen JT, Iivanainen M, et al: Cerebral NMR and CT imaging in dementia. J Comput Assist Tomogr 8(4):614–618, 1984.

8. Román GC: The identity of lacunar dementia and Binswanger disease. Med Hypotheses 16(4):389–391, 1985.

9. Cummings JL, Benson DF: Dementia, a clinical approach. Boston, Butterworths, 1983.

10. Jellinger K: Neuropathological aspects of dementia resulting from abnormal blood and cerebrospinal fluid dynamics. Acta Neurol Belg 76(2):83–102, 1976.

11. Román GC: Lacunar dementia, in: Hutton JT, Kenny AD (eds): Senile Dementia of the Alzheimer Type. New York, Liss, 1985, pp 131–151.

12. Mohr JP: Lacunes. Neurol Clin 1(1):201–221, 1983.

13. Fisher CM: Lacunar strokes and infarcts: a review. Neurology 32(8):871–876, 1982.

14. Román GC: Les lacunes cérébrales. Étude clinique et neuropathologique de 100 cas. Mémoire pour le Titre d'Assistant Étranger. Paris, Service de Neurologie et Neuropsychologie, Hôpital de la Salpêtrière, Universite de Paris, Faculté de Médecine Pitié-Salpétrière, 1975.

15. Román GC: Lagunas cerebrales: Estudio clínico y neuropatológico de 100 casos. Rev Fac Med Univ Nac Colombia 39:115–125, 1981.

16. Caplan LR, Schoene WC: Clinical features of subcortical arteriosclerotic encephalopathy (Binswanger disease). Neurology 28(12):1206–1215, 1978.

17. Loizou LA, Kendall BE, Marshall J: Subcortical arteriosclerotic encephalopathy: a clinical and radiological investigation. J Neurol Neurosurg Psychiatry 44(4):294–304, 1981.

18. Zeumer H, Schonsky B, Sturm KW: Predominant white matter involvement in subcortical arteriosclerotic encephalopathy (Binswanger disease). J Comput Assist Tomogr 4(1):14–19, 1980.

19. Rosenberg GA, Kornfeld M, Stovring J, et al: Subcortical arteriosclerotic encephalopathy (Binswanger): computerized tomography. Neurology 29(8):1102–1106, 1979.

20. Young IR, Randell CP, Kaplan PW, et al: Nuclear magnetic resonance (NMR) imaging in white matter disease of the brain using spin-echo sequences. J Comput Assist Tomogr 7(2):290–294, 1983.

21. Bradley WG, Waluch V, Brant-Zawadzki M, et al: Patchy, periventricular white matter lesions in the elderly: a common observation during MRI imaging. Noninvasive Medical Imaging 1:35–41, 1984.

22. Zimmerman RD, Fleming CA, Lee BC, et al: Periventricular hyperintensity as seen by magnetic resonance: prevalence and significance. AJNR 146(3):443–450, 1986.

23. De Reuck JL: The human periventricular arterial blood supply and the anatomy of cerebral infarctions. Eur Neurol 5(6):321–334, 1971.

24. Ishii N, Nishihara Y, Imamura T: Why do frontal lobe symptoms predominate in vascular dementia with lacunes? Neurology 36(3):340–345, 1986.

25. Okeda R: Correlative morphometric studies of cerebral arteries in Binswanger's encephalopathy and hypertensive encephalopathy. Acta Neuropathol (Berl) 26(1):23–43, 1973.

26. De Reuck JL, Eecken HM: Periventricular leukomalacia in adults. Clinicopathological study of four cases. Arch Neurol 35(8):517–521, 1978.

27. Tohgi H: Etiology and pathogenesis of dementia due to cerebrovascular disease, abstract. J Neurol 232(Suppl):62, 1985.

28. Román GC: Lacunar dementia: a small-artery form of vascular dementia, abstract. J Neurol 232(Suppl):82, 1985.

29. Dougherty JH, Simmons JD, Parker J: Subcortical ischemic disease: clinical spectrum and MRI correlation, abstract. Stroke 17:146, 1986.

30. Kinkel WR, Jacobs L, Polachini I, et al: Subcortical arteriosclerotic encephalopathy (Binswanger's disease). Computed tomographic, nuclear magnetic resonance, and clinical correlations. Arch Neurol 42(10):951–959, 1985.

LEE ANN LONEY, BS
J. THOMAS HUTTON, MD, PHD
JANICE R. STEWART, PHD
JULIAN E. SPALLHOLZ, PHD

Nutritional concerns for patients with Alzheimer's disease

Lee Ann Loney, BS, and Julian E. Spallholz, PhD, Department of Food and Nutrition, Texas Tech University, Lubbock, Tex; J. Thomas Hutton, MD, PhD, Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock, Tex; Janice R. Stewart, PhD, Department of Food and Nutrition, and Institutional Administration, Oklahoma State University, Stillwater, Okla. Send reprint requests to Lee Ann Loney, Department of Psychology, Texas Tech University, Lubbock, TX 79409.

Adequate nutrition is important throughout life and is of particular concern when a debilitating illness such as Alzheimer's disease occurs. Since weight loss and malnutrition are common in patients with Alzheimer's disease and other dementias, time and consideration must be given to the nutritional care of the patient. If the patient will not eat or has difficulty eating, various interventions may be employed to help improve nutrition. Also, a blended diet, supplements, or nasogastric feedings may be required in the more severe cases. Both the physician and primary caregiver need to be aware of the dietary methods of intervention that benefit the patient with Alzheimer's disease.

"Man is first of all, a nutritive process. He consists of a ceaseless motion of chemical substances."
—Alexis Carrell (1).

Adequate nutrition is one of the major concerns of families and physicians of patients with Alzheimer's disease (AD). This concern stems from the weight loss common among these patients and from the difficulty associated with feeding them. Substantial opportunity exists for the patient to develop malnutrition, which may aggravate the already existing demented state.

General principles of nutrition for the aged and demented

The nutritional needs of the elderly vary little from those of the younger adult. The generally accepted daily diet plan includes two servings of meat and dairy products, and four each of fruits and vegetables and of breads or cereals (2). However, since the metabolic rate of all cells decreases with age, as does physical activity among many older persons, the caloric requirements of the elderly also decrease (2). Generally recommended caloric intakes for healthy elderly individuals are 1,500 kcal per day for women and 2,000 kcal per day for men (2).

Since elderly individuals often take many medications, drug-nutrient interactions need to be considered, as many medications may decrease the absorption of nutrients, and nutrients may affect the absorption of medications (3,4). For example, tetracycline may chelate metals, forming an unabsorptive complex. Medications known to cause nutrient malabsorption are antacids, laxatives, some antibiotics, colchicine, and cholestyramine. Some medications that may bring about a loss of appetite include alcohol, amphetamines, antihypertensive agents (hydralazine, clonidine), diuretics, and estrogens. Fig 1 lists some nutrients and medications that interact to affect absorption (4–6).

Lower calorie intake and drug-nutrient interactions contribute to nutritional deficiencies in the elderly. Fig 2 lists the nutrients that are typically diminished in the elderly (7–9).

Nutritional problems associated with Alzheimer's disease

Although no clear evidence exists that nutritional requirements are altered by AD, the major difficulty is that these individuals often do not eat sufficiently to supply adequate calories or nutrients. This decreased food consumption may arise from a refusal to eat, forgetting to eat, or difficulty in eating. Typically, an individual suffering from AD will become temperamental and at times may hide food, throw it away, or refuse to eat. Some may simply forget to eat if not reminded. They may also lose the ability to reason and thus consume spoiled food or nonnutritive substances, or they may greatly restrict the diet to a favorite item such as candy. As the dementia progresses, the patient may forget how to chew or swallow, leading to the possibility of choking (10). Some demented patients, especially those with multi-infarct dementia, have marked bulbar dysfunction. This leads to difficulty in swallowing and often leads to recurrent bouts of aspiration pneumonia. Tube feeding may be required in these instances. Regardless of the cause of the decreased food intake by demented persons, weight loss and general malnutrition often occur in the latter stages of the disease. The malnourished state may aggravate the dementia directly or compound the symptoms with true nutritional deficiencies.

Approaches to treating nutritional problems

Of major importance in the nutritional management of the patient with Alzheimer's disease is training of the primary caregiver. The caregiver often donates considerable time to the feeding of the patient. Meals can be prepared and served in such a way as to make them easier to be eaten and less confusing to the AD patient. It is helpful to make mealtime as routine as possible. It is usually best if the Alzheimer patient eats in the same place and at the same time. Serving one food item at a time may lessen patient confusion. Caregivers have found it is better to have more frequent and smaller meals. Food service organizations that serve the elderly, such as Meals on Wheels, may benefit both the caregiver and patient (10). If choking is a major problem, a blended diet may be of benefit. Free liquids should be minimized, liquids should be provided in gelatin, puddings, mashed potatoes, and other solid and semisolid foods.

The physician may prescribe diet supplements when it is evident that the patient is at risk for malnutrition. Depending on the severity of the problem, supplements can range from multivitamin

supplementations to nasogastric tube feedings. The diet of the AD patient, who is at risk of becoming malnourished due to an inadequate intake of calories and/or other nutrients, can be supplemented with a variety of liquid formulas. Formulas are available with different nutrient and calorie contents to accommodate the particular needs of each patient. For example, if the patient has an inadequate intake of protein, a formula with 15 gm protein/240 cc formula would be appropriate. If general calories are needed with multiple fortification, a formula with 9 gm protein/240 cc would be sufficient. Prepared formulas can be costly; therefore, if the patient has no problem with lactose metabolism or diabetes, instant breakfasts available at most grocery stores are a good substitute for the formulas. These may also be more appealing to the patient than are the formulas.

A useful mnemonic for nutritional support of AD patients is "MEALTIMES":

M—Maintain a routine
E—Eat well-balanced meals
A—Alertness to any nutritional problems
L—Light and frequent meals
T—Teach the caregiver how to deal with the patient
I—Interactions between drugs and nutrients
M—Minimize confusion for the patient
E—Encourage the patient to eat
S—Supplement the diet when necessary

Minerals associated with Alzheimer's disease

There have been several studies linking minerals to the pathological characteristics of AD. Aluminum (Al) has been the most widely studied in relation to AD (11–16). It has been thought that Al may be involved in the etiology of such neurological disorders (13,14,17–19), but many now believe the Al accumulation to be merely an artifact of the disease (12,13,20). Many theories have been proposed as to the mode of action of Al and how it gains access to the brain (11–14,21,22). Numerous studies have been performed to induce artificially the neurofibrillary tangles of AD by administering Al to various laboratory animals (11,13,21–23,25–27).

Fluoride (Fl) is an interesting but little studied mineral in relation to AD. One epidemiological study correlated Fl with AD (28), while another indicated possible Fl treatment for AD patients to lessen the symptoms (29). Other studies have shown Fl to be antagonistic to Al (30).

Other minerals which have been studied less extensively in association with AD are silicon, calcium, zinc, copper, magnesium, manganese, bromine, and nickel (14,31–38). Silicon is evaluated in the senile plaques and CSF of AD patients (14,34,35). Calcium, copper, magnesium, zinc, bromine, and nickel have been found elevated in various body fluids and

1. Drug-nutrient interactions.

Medication	Action
Aluminum hydroxide gel	Malabsorption of phosphate and vitamin A, destruction of thiamine
Aspirin	Depletes ascorbic acid and potassium and may cause iron deficiency
Bisacodyl	Fluid and electrolyte loss
Cholestyramine	Malabsorption of fat, iron, carotene, vitamins A, D, and K, and folic acid
Colchicine	Malabsorption of sodium, potassium, fat, carotene and B_{12}
Furosemide	Enhances excretion of potassium, calcium, magnesium, sodium, chloride, and water
Phenolphthalein	Malabsorption of vitamin D, calcium, and other minerals
Sulfasalazine	Alters folic acid absorption
Hydralazine	B_6 antagonism, and sodium and water retention
Isoniazid	B_6 antagonism
Methotrexate	Folic acid antagonist, and malabsorption of B_{12} and fat
Penicillamine	Chelates copper, iron and zinc, and decreases taste acuity
Phenobarbital	Decreases serum folic acid, B_{12}, pyridoxine, calcium and magnesium
Phenytoin	Decreases serum folic acid and alters other serum minerals and vitamin levels
Triamterene	Electrolyte imbalance
Coffee and tea	May precipitate neuroleptic drugs
Fiber	May reduce absorption of digoxin and acetaminophen
Protein or charcoal-meats	May decrease plasma half-life of theophylline
Salt	Reduces effectiveness of lithium
Boiled or fried onions	Increases fibroinolytic activity of warfarin
Broccoli, turnip greens, lettuce, cabbage	Inhibits warfarin

2. Nutritional deficiencies in the elderly.

Calories	Vitamins
Fiber	A
Protein	C
Minerals	D
Iron	B_6
Calcium	B_{12}
Potassium	Thiamine
Magnesium	Riboflavin
Zinc	Niacin
	Folic acid

tissues of demented patients (32,36,37). Calcium uptake has been shown to be altered in fibroblasts from AD patients (38). Zinc is considered to have an association with dementia because many of the enzymes involved in DNA replication, repair, and transcription are zinc metalloenzymes (33). Manganese intoxication has been reported in a demented patient with AD-like plaques and tangles (31).

Conclusion

Treatment for Alzheimer's disease and other dementias includes proper medical, neurological, psychological, family counseling, and drug therapies. A recently published study (39) demonstrated the possible use of the anticholinesterase THA as a treatment for symptoms of Alzheimer's disease. There is, so far, very little in the literature regarding nutritional care, including nutritional monitoring and therapy, of the demented patient. Proper nutrition is essential for optimal recovery from and defense against major illnesses. Patients with AD frequently do not receive sufficient calories and other nutrients, exacerbating their mental and physical decline. Understanding the relationship between nutritional needs and mental and physical health may lead to nutritional intervention by the physician and caregiver of the patient with Alzheimer's disease. This may be effective in delaying mental and physical decline in the individual.

REFERENCES

1. Pike R, Brown M: Nutrition: An Integrated Approach. New York, John Wiley and Sons, 1984, p 649.
2. Hamilton EMN, Whitney EN: Nutrition: Concepts and Controversies. St. Paul, Minn, West Publishing Co, 1982, pp 30, 498.
3. Schneider EL, Vining EM, Hadley EC, et al: Recommended dietary allowances and the health of the elderly. N Engl J Med 314(3):157–160, 1986.
4. Garabedian-Ruffalo SM, Ruffalo RL: Drug and nutrient interactions. Am Fam Physician 33(2):165–174, 1986.
5. Smith CH, Bidlack WR: Dietary concerns associated with the use of medications. J Am Diet Assoc 84(8): 901–914, 1984.
6. Drug nutrient interactions. J Am Diet Assoc 80:482, 1982.
7. Munro HN: Nutritional status of aged, in Corkin S (ed): Alzheimer's Disease: A Report of Progress in Research (Aging, vol 19). New York, Raven Press, 1982, pp 287–294.
8. Rivlin RS: Summary and concluding statement: evidence relating selected vitamins and minerals to health and disease in the elderly population in the United States. Am J Clin Nutr 36(Suppl 5):1083–1086, 1982.
9. Kohrs MB: New perspectives on nutritional counseling for the elderly. Bol Asoc Med PR 75(8):363–365, 1983.
10. Mace NL, Rabins PV: The 36-Hour Day: A Family Guide to Caring for Persons with Alzheimer's Disease, Related Dementing Illinesses, and Memory Loss in Later Life. Baltimore, Johns Hopkins University Press, 1981, pp 53–59.
11. Crapper DR, Karlik S, DeBoni U: Aluminum and other metals in senile (Alzheimer's) dementia, in Katzman R, Terry RD, Bick KL (eds): Alzheimer's Disease: Senile Dementia and Related Disorders (Aging, vol 7). New York, Raven Press, 1978, pp 471–485.
12. Shore D, Millison M, Holtz JL, et al: Serum aluminum in primary degenerative dementia. Biol Psychiatry 15(6): 971–977, 1980.
13. Shore D, Wills MR, Savory J, et al: Serum parathyroid hormone concentrations in senile dementia (Alzheimer's disease). J Gerontol 35(5):656–662, 1980.
14. Banks WA, Kastin AJ: Aluminum increases permeability of the blood-brain barrier to labelled DSIP and beta-endorphin: possible implications for senile and dialysis dementia. Lancet 2(8361):1227–1229, 1983.
15. Garruto RM, Fukatsu R, Yanagihara R, et al: Imaging of calcium and aluminum in neurofibrillary tangle-bearing neurons in Parkinsonism-dementia of Guam. Proc Natl Acad Sci USA 81(6):1875–1879, 1984.
16. Thiele VF: Clinical Nutrition. St Louis, Mosby Co, 1980.
17. Levick SE: Dementia from aluminum pots? letter. N Engl J Med 303(3):164, 1980.
18. Liss L, Couri D, Young E, et al: Facilitation of Alzheimer's dementia by exogenous factors (Abstract). J Neuropathol Exp Neurol 35:372, 1976.
19. Ulmer DD: Toxicity from aluminum antacids, editorial. N Engl J Med 294(4):218–219, 1976.
20. Scheinberg IH: Toxicity of heavy metals to the central nervous system, in Katzman R, Terry RD, Bick KL (eds): Alzheimer's Disease: Senile Dementia and Related Disorders (Aging, vol 7). New York, Raven Press, 1978, pp 487–491.
21. Crapper DR, Krishnan SS, Quittkat S: Aluminum, neurofibrillary degeneration and Alzheimer's disease. Brain 99(1):67–80, 1976.
22. Crapper DR, Quittkat S, Krishnan SS, et al: Intranuclear aluminum content in Alzheimer's disease, dialysis encephalopathy, and experimental aluminum encephalopathy. Acta Neuropathol (Berl) 50(1):19–24, 1980.
23. Crapper DR, Dalton AJ: Alterations in short-term retention, conditioned avoidance response acquisition and motivation following aluminum induced neurofibrillary degeneration. Physiol Behav 10(5):925–933, 1973.
24. Crapper DR, Krishnan SS, Dalton AJ: Brain aluminum distribution in Alzheimer's disease and experimental neurofibrillary degeneration. Science 180(85):151–153, 1973.
25. DeBoni UD, Otvos A, Scott JW, et al: Neurofibrillary degeneration induced by systemic aluminum. Acta Neuropathol (Berl) 35(4):285–294, 1976.
26. Greger JL, Bula EN, Gum ET: Mineral metabolism of rats fed moderate levels of various aluminum compounds for short periods of time. J Nutr 115(12):1708–1716, 1985.
27. Terry RD, Pena C: Experimental production of neurofibrillary degeneration. 2. Electron microscopy phosphatase histochemistry and electron probe analysis. J Neuropathol Exp Neurol 24:200–210, 1965.
28. Still CN, Kelley P: On the incidence of primary degenerative dementia versus water fluoride content

in South Carolina. Neurotoxicology (Park Forrest, IL) 1:125–132, 1980.
29. Liss L: Fluoride administration in Alzheimer's disease, in Liss L (ed): Clinical Implications of Aluminum Neurotoxicity. Pathotox Publications, 1983.
30. Shore D, Wyatt RJ: Aluminum and Alzheimer's disease. J Nerv Ment Dis 171(9):553–558, 1983.
31. Banta RG, Markesbery WR: Elevated manganese levels associated with dementia and extrapyramidal signs. Neurology 27(3):213–216, 1977.
32. Bogden JD, Troiano RA, Joselow MM: Copper, zinc, magnesium, and calcium in plasma and cerebrospinal fluid of patients with neurological diseases. Clin Chem 23(3): 485–489, 1977.
33. Burnet FM: A possible role of zinc in the pathology of dementia. Lancet 1(8213):186–188, 1981.
34. Hershey CO, Hershey LA, Varnes A, et al: Cerebrospinal fluid trace element content in dementia: clinical, radiologic, and pathologic correlations. Neurology 33(10): 1350–1353, 1983.
35. Hershey LA, Hershey CO, Varnes AW: CSF silicon in dementia: a prospective study. Neurology 34(9):1197–1201, 1984.
36. Rindly A, Nordquist P, Stromberg H: Trace elements states in geriatric patients. Nutrition Research (Suppl 1):275–276, 1985.
37. Shore D, Henkin RI, Nelson NR, et al: Hair and serum copper, zinc, calcium, and magnesium concentrations in Alzheimer-type dementia. J Am Geriatr Soc 32(12):892–895, 1984.
38. Peterson C, Gibson GE, Blass JP: Altered calcium uptake in cultured skin fibroblasts from patients with Alzheimer's disease, letter. N Engl J Med 312(16): 1063–1065, 1985.
39. Summers WK, Majovski LV, Marsh GM, et al: Oral tetrahydroaminoacridine in long-term treatment of senile dementia, Alzheimer type. N Engl J Med 315(20):1241–1245, 1986.

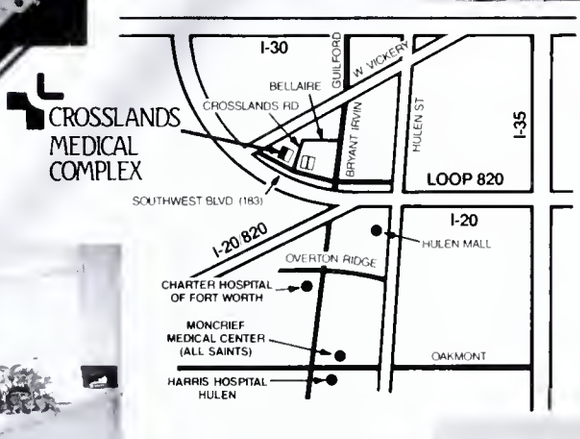
ACKNOWLEDGMENT
The authors would like to acknowledge Leeanna Johnson, RD, and Ann Domenico for their valuable comments.

B.Y.O.S.*

CHECK YOUR PERSONNEL WORRIES AND BUSINESS FRUSTRATIONS AT THE DOOR.

This is your invitation to explore a breakthrough officing concept for physicians. For the physician just beginning practice or for the established physician with many outside demands — large hospital practices, practices in multiple locations, family or other business interests — the administrative and business tasks of a privately owned or leased office are cumbersome and time-consuming.

A professional management group has taken the responsibility of fully furnishing, equipping and staffing Crosslands Medical Complex. Each physician is charged an hourly rate for use of the facility based on a reserved time schedule. He enjoys a private suite and exam rooms and shares the lab, X-ray, nursing and clerical staff with other physicians.



✳ Bring your own stethoscope, but that's all you'll need when officing at Crosslands Medical Complex. It's *practice made perfect.*

Write or call for free brochure with complete details.

6420 Southwest Blvd.
Suite 200
Fort Worth, Texas 76109
817/763-0303

CROSSLANDS MEDICAL COMPLEX
practice made perfect

JEFFREY W. ELIAS, PHD
J. THOMAS HUTTON, MD, PHD
AVERY H. BRATT, PHD
BEVERLY A. MILLER, MA
LISA A. WEINSTEIN

Caretaker coping and Alzheimer's patient decline

Jeffrey W. Elias, PhD, Avery H. Bratt, PhD, Beverly A. Miller, MA, and Lisa A. Weinstein, Department of Psychology, Texas Tech University, Lubbock, TX 79409–4100. J. Thomas Hutton, MD, PhD, Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock, TX 79430. Send reprint requests to Dr Elias.

Caregivers of Alzheimer's disease patients develop psychological coping strategies similar to those observed in individuals who develop serious illnesses. Information gathering is a primary coping strategy, and physicians are often asked to provide disease-related information that not only describes the disease process, but provides a timetable for action and insight into the caregiver role. The relationship between patient decline and caregiver psychological response is discussed with respect to denial of stress in the caregiver and the difficulties in relating reported caregiver stress to the patient's functioning.

A common pattern of psychological coping strategies for those faced with a major illness is shown in Fig 1 (1). With Alzheimer's disease we find some combination of these response patterns in the patient's caregivers and family members as they attempt to understand and adjust to the nature of the disease process in the patient. The physician, specialist, or the provider of basic health care is often considered by the caregiver to play a major role in the development of these coping strategies, particularly coping strategies which involve the physician as a major source of information and recommendations.

Caregivers want to know about the essential nature of the disease and its potential etiology. To establish a successful coping strategy, however, caregivers need to know not only basic information, but also (1) what to expect from the patient, (2) what timetable can be expected for progression of the disease and how one should plan on this basis, and (3) ultimately what can be expected of themselves. There is a great deal of information now available for predicting the course of the disease process in the patient (2,3). While the progressive nature of Alzheimer's disease is well-known, onset of the disease before diagnosis is only roughly predictable and individual rates of progression may differ greatly. This makes it difficult to provide accurate timetable-related information, particularly with respect to major decision making such as institutionalization of the patient.

Time-until-institutionalization

Hutton (4) approached the problem of providing families with an estimate of time to potential institutionalization by developing an informant-based rating scale that asked the caregiver to rate the Alzheimer's disease patient in such areas as self-maintenance, memory, orientation, and emotionality. Analysis of data provided by 14 caregivers over a two-year period revealed that there was a strong correlation between an increase in (1) the number of symptoms of decline in the patient over time, and (2) the point at which the caregivers decided that institutionalization was necessary. The primary predictors on the functional scale were behaviors related to self-maintenance (eg, incontinence, bathing, grooming, sleeping) or communication (notable withdrawal of patient from social interaction and a dullness of emotional response).

There are of course factors beyond the patient's condition that are involved in the decision to institutionalize. Availability of a proper institution and the possibility of a diagnosis that lends itself to admission to a particular institution are two very practical considerations. Even if an appropriate institution can be found, openings for admission may not coincide with the caregiver's decision process. Many caregivers report finding themselves in a position of having to "prematurely" institutionalize the patient. That is, in the process of planning, admission to an institution is applied for, and a waiting period begins. When the opening appears the caregiver may feel that he is still capable of providing care, but know that another opening may not be available for some time. Caregivers then are forced to look into the future and estimate their own capabilities as well as those of the patient. This is not an enviable position and what is, or is not, premature institutionalization completely defies definition. As part of the support system for the caregiver, physicians are often asked to help in making such a decision. While the physician may be able to estimate fairly well the stage of the disease process in the patient, it is very difficult to estimate the coping capabilities of the caregivers.

Caregiver stress and patient decline

The difficulty in estimating caregiver coping ability is compounded by the fact that caregivers do not always perceive their own stress as being directly related to the changes in the patient, but have a tendency to see their stress as a function of their own inabilities to cope. A common attitude for a caregiver to adopt is that the patient cannot get better, but the caregiver can do a better job of coping.

In our own ongoing research we find that direct caregiver estimates of patient memory, initiation, and judgment do not correlate highly with measured caregiver anxiety, anger, depression, or attitudes toward aging. We find better correlations between patient functioning and caregivers' psychological functioning when the functioning of the patient is described more in terms of general limitations of the patient. That is, reports of caregiver stress are more likely to relate to the patient's inability to go out of the house than to more direct inquiry concerning the loss of functions (memory, spatial orientation) that may lead to that inability.

1. Major illness coping strategies

Seeking information
Learning illness-related procedure
Setting of limited or concrete goals
Requesting emotional support and reassurance
Denying or minimizing seriousness of difficulties
Rehearsing alternative outcomes
Finding general purpose and meaning in events

Caregivers can estimate more accurately how difficult it is for them not to be able to make a quick trip to the store than they can estimate how difficult it is to cope with the patient's memory loss in general. While we find a range of anxiety, anger, and depression in the caregivers we study, based on normative standards they do not as a group describe themselves as particularly angry, anxious, or depressed. Without question, however, the role of the caregiver is a stressful one and those in that role have less reserve capacity or time for meeting the demands of additional stressful situations.

Denial and coping

We do find, based on normative standards, that the observed caregivers score very high on a scale of denial of symptoms of stress. This is an expected coping mechanism for patients dealing with disease processes, and we are finding that it is a primary coping strategy for caregivers of Alzheimer's disease patients. The caregivers do not deny the condition of the patient, but deny that they are experiencing a great amount of stress in the caregiver role. This is not necessarily an unwise or foolish strategy. When there is no viable alternative, ignoring pain or stress while continuing to function is a reasonable strategy. At some point, however, such denial can lead to poor decisions regarding one's ability to adequately cope with the situation, and in these cases we urge the caregivers to more truthfully assess their ability to cope.

The use of denial as a coping mechanism may explain why caregivers do not necessarily relate the behavior of the patient to the decision to institutionalize, even though as Hutton (4) has shown, patient functioning can be used at least in some circumstances to predict institutionalization. The tendency for caregivers to deny that they are experiencing stress in coping with patient symptoms is further illustrated in two studies. Zarit et al (5) asked caregivers to read over a list of 16 common memory and behavioral problems associated with impairment in the elderly. Problems with memory were listed as primary problems, as were difficulties in patient self-maintenance. When asked to relate these problems in behavior to the actual burden felt as caregiver, the caregivers did not consider these to be major factors of burden. Chenowith and Spencer (6) found that caregivers who had to institutionalize the Alzheimer's disease patient reported the primary reason to be "feeling overwhelmed." Specific behavioral problems such as violence, emotionality, loss of social interaction, and incontinence were mentioned as primary problems, but not primary reasons for institutionalization. Other reasons reported for institutionalization of the patient were illness of caregiver, outside recommendation, financial problems, and no one left to be the caregiver.

Guilt and perceptions of reality

The caregiver role inevitably produces feelings of guilt about wanting to get relief from the situation, sometimes to the point of not wanting to reveal feelings of anger or frustration, or even the condition of the patient to others. In the caregiver situations we are currently observing, guilt tends to cloud perceptions of reality and gets in the way of making logical choices. Refusing to get even occasional relief because he feels guilty about it prevents the caregiver from getting the perspective needed to deal successfully with the caregiver role. Ironically, the caregiver who attempts to stay at his or her post at all costs runs the risk of becoming less effective.

Disease progression, planning, and caregiver response

In summary, it appears that the current state of knowledge of Alzheimer's disease permits: (a) a very good understanding of the progressive nature of the disease, (b) some feel for potential need for institutionalization based on patient functioning in the caregiver environment, and (c) some expectations for the choice of psychological coping strategies and their relative effectiveness for caregivers. To this point there has been only limited success in relating self-report estimates of caregiver stress to the patient's degree of functional loss. This lack of a predictive relationship between degree of patient decline and degree of caregiver distress may in part reflect the coping strategies of the caregivers (7).

REFERENCES

1. Moos RH, Tsu VD: The crisis of physical illness: an overview, in Moos RH (ed): Coping with Physical Illness. New York, Plenum Medical Book Co, 1977.
2. Hutton JT, Kenny AD: Senile Dementia of the Alzheimer Type. New York, Liss, 1985.
3. Reisberg B, Ferris SH, de Leon MJ, et al: Age-associated cognitive decline and Alzheimer's disease: implications for assessment and treatment, in Bergener M, Ermini M, Stahelin HB (eds): Thresholds in Aging. New York, Academic Press, 1985.
4. Hutton JT, Dippel RL, Loewenson RB, et al: Predictors of nursing home placement of patients with Alzheimer's disease. Tex Med 81(7):40–43, 1985.
5. Zarit SH, Reever KE, Bach-Peterson J: Relatives of the impaired elderly: correlates of feelings of burden. Gerontologist 20(6):649–655, 1980.
6. Chenoweth B, Spencer B: Alzheimer's disease: subjective experiences of families. Gerontol Soc Amer, San Francisco, Calif, 1983.
7. Elias JW, Hutton JT, Weinstein, L, et al: Denial vs a successful coping strategy in Alzheimer caregivers. Alzheimer's Disease: Biological and Psychological Issues. The University of Texas at Austin, Austin, Tex, 1986.

JEAN PEARSON SCOTT, PHD

P. N. McKENZIE, MS

D. SLACK, MS

J. THOMAS HUTTON, MD, PHD

The role of coping behaviors for primary caregivers of Alzheimer's patients

Jean Pearson Scott, PhD, P. N. McKenzie, MS, and D. Slack, MS, Department of Human Development and Family Studies, Texas Tech University, Lubbock, Tex 79409; J. Thomas Hutton, MD, PhD, Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock, TX 79430. Send reprint requests to Dr Scott.

This article reports the results of a study of 21 primary providers of care to patients with Alzheimer's disease. Data were obtained regarding the use and effectiveness of 11 coping strategies used in the reduction of Alzheimer's-related stress. The most effective strategies for reducing stress involved information seeking and solicitation of outside aid. Several strategies—changes in recreational contacts, modified sleeping patterns, and increased time with patient—were associated with an increase in stress levels for primary caregivers. Suggestions are included for health care professionals who help patients who have Alzheimer's disease.

The role of coping behaviors in the reduction of stress associated with negative life events has been widely articulated within the social sciences (1–10). One definition of coping (11), designates it as " . . . any response to external life-strains that serves to prevent, avoid, or control emotional distresses." A wide range of behaviors has been used in the literature as indicators of coping. In fact, a recent review on coping presents more than 50 different coping behaviors associated with stress reduction or maintenance (12).

For example, one study (13) suggests that the most effective coping behaviors involve the development of outside sources of assistance and practice in the actual care of the patient. Other studies of chronic illness (14,15) have stressed the need for coping behaviors that involve increased information, strong family support, and contact with outside agencies. Since many individuals view the physician and other health care professionals as primary sources of information in times of stress, these professionals must be aware of the critical relationship between coping behaviors and health.

Although much research has focused on coping behaviors for families of patients with chronic illnesses such as cancer, little has been written about the stress involved in progressive mental disease. One study (8) has indicated that the illnesses which prove most disruptive are those that produce psychological alterations. One of the most dramatic forms of psychological impairment is found in the progressive abnormalities of memory, behavior, and cognition associated with Alzheimer's disease. Although many patients with Alzheimer's disease are cared for in nursing homes, the majority are cared for outside of the institutional setting by family members. This care "is often provided at great cost . . . in terms of psychological, physical and financial resources" (9, p 649).

The strains involved in caring for the Alzheimer's disease victim are generally recognized, but little research has focused on the ability of family members to cope with the increasing and prolonged stress. The purpose of our research was to examine the role of coping strategies for primary caregivers of Alzheimer's disease patients and to offer specific suggestions to aid in the reduction of stress.

Methods

The sample consisted of 21 subjects who were the primary caregivers for a family member with Alzheimer's disease. Participants were obtained from the neurology department at the Texas Tech University Health Sciences Center, the Visiting Nurse Service Adult Activity Center, and an Alzheimer's disease family support group. The mean age of a caregiver was 64.4 years (range 37 to 80 years), and the majority of subjects were female (62%). The educational level of the caregivers ranged from sixth grade to graduate school, and the average income was approximately $21,000. Most of the participants cared for the patient in the caregiver's home (71%) while 29% of the patients lived in a group care facility.

Each caregiver was asked to participate in an interview that would focus on the impact of the disease on himself or herself and other family members and on how they coped with the related stress. Upon consent, an interview was scheduled and conducted by the members of the research team, who worked in pairs during the administration of each interview. These sessions generally required 45 min to an hour to complete.

For the purposes of our research, a coping strategy was defined as anything a caregiver does in response to Alzheimer's-related stress. In this way, coping strategies may increase as well as decrease the level of stress. For example, a caretaker may use a strategy that involves spending more time with the Alzheimer's disease victim, even though more stress results. For this reason, our research focused on both the strategies per se and their effects on the individual's level of stress.

Because there was no instrument for assessing the coping strategies used by caregivers, one was developed: the Coping Effectiveness Index (CEI). Eleven major components were obtained from relevant literature:

1. Employment—The caregiver's employment status may be modified. He or she may be required to obtain fulltime employment in order to meet the financial demands of health care for the Alzheimer's victim. Another caregiver may be forced to discontinue employment in order to assume custodial care of the patient.

2. Finances—If the caregiver assumes responsibility for the patient's or family's finances, stress involved in meeting health care expenditures may ensue.

3. Time with patient—As the patient's condition deteriorates, his or her care may require more of the caregiver's time.

4. Caregiver's personal time—Because of the added demands of caring for the patient, the amount of time available to the caregiver for personal needs may change.

5. Recreation—The caregiver may modify patterns and/or the frequency of social intercourse as a result of caring for the patient.

6. Patterns of correspondence—The caregiver may change the frequency of correspondence or the recipient of his or her correspondence.

7. Information seeking—The caregiver may actively seek information regarding the nature of the disease or the typical responsibilities of a caregiver.

8. Outside aid—The caregiver may need to seek additional help to care for the patient.

9. Planning for the future—The caregiver may plan for the patient's future care. For example, the caregiver may consider whether the patient will eventually be institutionalized or remain in the home.

10. Sleep—The caregiver's sleep patterns may be disrupted or changed because of his or her responsibilities.

11. Maintenance of own health—The caregiver may have to modify his or her ability to maintain personal health needs in association with caring for the patient with Alzheimer's disease.

The Coping Effectiveness Index was used to code the transcribed interviews on each of the 11 strategies. Each strategy used was coded with regard to its overall coping effectiveness (coded on a 5-point Likert scale). Three trained raters were used for each interview; an average interrater reliability of 92.6% was obtained for the coding.

Results

Data were collected on the use and effectiveness of each of the 11 strategies, and results are presented in Fig 1. The first data column in Fig 1 presents the percentage of subjects indicating use of a particular coping strategy. The most common strategies involved information seeking (91.3%), seeking outside aid (87%), a change in the amount of time spent with the patient (87%), and a modification in the caregiver's use of free time (87%). The least commonly used component was a change in correspondence (17.4%).

Data reflecting coping effectiveness are also shown in Fig 1. The most effective strategies for decreasing stress were information seeking (82.6%—combined categories of large and moderate decrease) and obtaining outside aid (78.2%—combined large and moderate). The strategies most often reported as accompanying an increase in stress were an increase in the amount of time spent with the patient (65.2%—combined categories of moderate and large increase), a disruption in sleeping patterns (43.5%—combined moderate and large), and a change in recreational contacts (43.5%—combined).

Discussion

In reviewing the data in Fig 1, it is not surprising that information seeking and the solicitation of outside aid are most often associated with a decrease in the level of caregiver stress. The effectiveness of these strategies in reducing life stress has been articulated by numerous social scientists (1–10). It is surprising, however, that the strategy of future planning was not more strongly associated with a decrease in stress (only 17.4% of the sample indicated stress reduction). In fact, planning appears to be more indicative of a stress increase (34.7% of the sample) rather than a stress reduction. The lack of effectiveness of this strategy may be due to the progressive deterioration of the disease and acknowledged lack of cure. Individuals who choose to make plans are often faced with possibilities that are both costly and negative (eg, the financial burden of a nursing home, the patient's chronic confusion, etc). For such individuals, planning for the future may serve as a reminder that the worst is yet to come. As one subject indicated, "I don't make plans for the future. I have enough worries just trying to take each day as it comes."

It is also important to note that most of the coping strategies associated with an increase in stress involved a change or modification in the personal life of the caregiver. Changes in recreational contacts, sleep patterns, time commitments, and financial status are all more closely identified as sources of stress rather than effective strategies for stress reduction. However, a problem exists in that most of these strategies are inherent in the role of a primary caregiver. As the patient's level of functioning begins to deteriorate, the caregiver must devote

1. Coping behavior use and effectiveness.

Behavior	% Using Behavior	Effect on Stress (% of Caregivers Using Coping Behavior)*				
		Large Decrease	Moderate Decrease	No Change	Moderate Increase	Large Increase
Employment	43.5	8.7	13.0	52.2	13.0	0.0
Finances	60.9	0.0	0.0	39.1	30.4	4.3
Time with patient	87.0	0.0	17.4	8.7	52.2	13.0
Free time	87.0	0.0	34.8	43.5	13.0	0.0
Recreation	82.6	0.0	26.1	26.1	39.1	0.0
Correspondence	17.4	4.3	30.4	0.0	0.0	0.0
Information seeking	91.3	8.7	73.9	4.3	0.0	4.3
Outside aid	87.0	39.1	39.1	4.3	8.7	8.7
Reduced sleep	65.2	0.0	4.3	26.1	43.5	0.0
Future planning	78.1	8.7	8.7	26.1	30.4	4.3
Maintenance of own health	30.4	0.0	0.0	43.5	4.3	0.0

*Totals of less than 100% reflect unavailable data.

larger portions of time and responsibility to the task of caregiving. As one caregiver described it: "I have come to the point where I have built my life around her. My main purpose in life is now caring for my wife. I don't care what it takes either, I'll care until I have to crawl!"

It appears then that the built-in stress inherent in this role necessitates the implementation of more effective stress reducers (ie, information seeking and gaining outside aid).

Suggestions for health care professionals

The findings of our study suggest several ways that caregivers can reduce stress.

INCREASING INFORMATION

Since the seeking of information was most closely associated with the reduction of stress, health care professionals should take care to distribute to the family members of patients with Alzheimer's disease any information regarding the origin, detection, and progression of the disease. Family members should be made aware of the personal adjustments and time requirements accompanying the role of caregiver. Such information will enable the family members to better prepare for the impending stress.

DEVELOPMENT OF A REFERRAL NETWORK

Since many caregivers may be unaware of possible sources of assistance, health care professionals can help by coordinating various referral sources. An information packet can be developed which includes such agencies as nursing homes, neurology specialists, therapists or support groups, housekeeping attendants, sources of financial aid, employment agencies, and private nurses. Such a referral network can enable a patient's family to better navigate the stressful adjustments required in the role of caregiving.

COORDINATION OF CAREGIVING RESPONSIBILITIES

Recognizing the level of stress inherent in the role of caregiver, health care professionals can suggest that responsibilities be distributed in such a way that no one individual assumes the majority of the burden. A schedule can be implemented whereby family members can share various household tasks and caregiving responsibilities. Of course it should be noted that in many situations, extended family members are simply unable to assist the caregiver. Suggesting that they do so will only serve to induce feelings of guilt for "abandoning the Alzheimer patient." The health care professional should then take care to recognize situations where assistance from family members is difficult, if not impossible, and to proceed in a way that does not produce such guilt reactions. In those situations where certain family members are unable or unwilling to participate, an effort should be made to enlist the cooperation of outside helpers (eg, private nurses, lay volunteers, church members, etc). In this way, the stress of caregiving is not assumed by any one individual.

The findings generated in this study indicate a general relationship between certain coping strategies and their ability to successfully reduce caregiver stress. Health care practitioners can play a valuable role in caregiver stress reduction by providing information and encouraging the use of outside sources of assistance.

REFERENCES

1. Bandura A: Social learning theory. Englewood Cliffs, New Jersey, Prentice-Hall, Inc, 1977.

2. Cohen F: Coping with surgery: information, psychological preparation, and recovery, in Poon LW, Chiriboga DA (eds): Psychological issues. Washington, DC, American Psychological Association, 1980, pp 375–382.

3. Folkman S, Lazarus RS: An analysis of coping in a middle-aged community sample. J Health Soc Behav 21(3):219–239, 1980.

4. Andrews G, Tennant C, Hewson DM, et al: Life event stress, social support, coping style, and risk of psychological impairment. J Nerv Ment Dis 166(5):307–316, 1978.

5. Eaton WW: Life events, social supports, and psychiatric symptoms: a re-analysis of the New Haven data. J Health Soc Behav 19(2):230–234, 1978.

6. Lin N, Simeone RS, Ensel WM: Social support, stressful life events, and illness: a model and an empirical test. J Health Soc Behav 20(2):108–119, 1979.

7. McCrae RR: Age differences in the use of coping mechanisms. J Gerontol 37(4):454–460, 1982.

8. Thompson EH Jr, Doll W: The burden of families coping with the mentally ill: an invisible crisis. Family Relations 31:379–388, 1982.

9. Zarit SH, Reever KE, Bach-Peterson J: Relatives of the impaired elderly: correlates of feelings of burden. Gerontologist 20(6):649–655, 1980.

10. Videka-Sherman L: Coping with the death of a child a study over time. Am J Orthopsychiatry 52(4):688–689, 1982.

11. Pearlin LI, Schooler C: The structure of coping. J Health Soc Behav 19(1):2–21, 1978.

12. Slack DM: The effects of self-perception and locus of control on coping behavior: a study of caregivers of Alzheimer's patients. Unpublished master's thesis, Texas Tech University, 1985.

13. Maxwell MB: A terminally ill adolescent and her family. Am J Nurs 72(5):925–927, 1972.

14. Bentovim A: Handicapped pre-school children and their families—effects on child's early emotional development. Br Med J 3(827):634–637, 1972.

15. Croeker AC, Cullinane MM: Families under stress. The diagnosis of Hurler's syndrome. Postgrad Med 51(3):223–229, 1972.

ACKNOWLEDGMENT

This study was supported by a Biomedical Support Grant, Public Health Service and Texas Tech University, Lubbock, Tex, 1983–1984.

BERRY N. SQUYRES, MD

Alzheimer's disease and exercise

Management for the patient with dementia is biopsychosocial rather than solely medical. The goals of such treatment include treatment of intercurrent illness, treatment of symptoms when possible, and provision of a physical environment that will maximize the patient's ability to function. Although there is little published regarding exercise for the demented patient, it is suggested that a well-planned exercise program is definitely beneficial. An exercise program offers cardiovascular, musculoskeletal, metabolic, and psychological benefits. Programs that could be adapted to the demented patient are suggested. These programs should be followed by the patient and the caregiver and are advantageous to both.

Berry N. Squyres, MD, Department of Family Medicine, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

It is not necessary to reiterate the facts defining the rapid aging of the US population. These figures are well known, especially to health care providers. This attainment of advanced age by substantially large numbers of people has inevitably led to a dramatic increase in the numbers of patients with Alzheimer's disease and the much less frequent multi-infarct dementia (MID).

Along with other chronic illnesses that continue for a long, indefinite period of time and that include a steady progressive deterioration of function, "treatment" for dementia is to a large degree biopsychosocial rather than solely medical (1). The biopsychosocial model is said to enable the physician to extend application of the scientific method to aspects of everyday practice and patient care heretofore not deemed accessible to a scientific approach. The goals of such treatment are to maintain the physical health of the patient by treating other intercurrent diseases that may aggravate the dementia, by treating symptoms when possible, and by providing a social and physical environment that will maximize the demented patient's ability to function and minimize troublesome behavior (2–4).

There is little published specifically about exercise programs for patients with dementia. This article enumerates the generally accepted advantages to regular exercise and then makes suggestions that could be individualized for patients with Alzheimer's disease and multi-infarct dementia.

"Health promotion" and "wellness" are hollow terms when applied to exercise recommendations for patients with dementia. "Risk factor intervention" is perhaps a better term (5). Sedentary lifestyle is a definite risk factor in cardiovascular disease, and there are several other aspects of "normal aging" that can be demonstrated to be the result of inactivity (6). The results of forced inactivity that also coexist with "normal aging" include increase in bone calcium loss, decrease in maximum oxygen utilization, decrease in cardiac output, decrease in red blood cell mass, and a decrease in glucose tolerance. There is also increased total peripheral resistance, increased systolic blood pressure, and increased body fat and cholesterol.

Goals have been suggested for planning care of the mentally impaired elderly (7). These goals include: the preservation and enhancement of residual capacity; the modification or reduction of the premorbid need associated with these faculties; and whenever feasible, the elimination or reduction of impairment. It is my belief that regular exercise can be one means by which there may be "rational exercise of unimpaired abilities."

It is usually stated that in order to attain cardiovascular fitness, there must be exercise for 15 to 20 consecutive minutes at least three times per week and the exercise must be of the intensity to increase the heart rate to 75% of the maximal heart rate. (In the absence of a maximal cardiac stress test, maximal heart rate can be calculated as roughly 220 minus age). There are obviously many limitations in the use of this definition for the demented patient. It is very unlikely that any patient with dementia should reach this level of exercise. Without doubt, a cardiac stress test would be required. Such an evaluation would not be feasible in many demented patients. It is of considerable importance that the health benefits which will be enumerated in this article are measurable at the lower levels of activity (8). The improvement is greatest when the least active individuals are compared with the moderately active; much less effect is apparent between the moderately active and the very active.

The major areas of benefit sought by an exercise program fall principally into the realm of the cardiovascular system, the musculoskeletal system, the metabolic effects, and the psychologic effects.

Cardiovascular benefits

The major cardiovascular benefits generally accepted as being enhanced by regular exercise are increased oxygen utilization, with its improvement of myocardial function, and the decreased risk of hypertension. The best overall measurement of fitness is the measure of maximal oxygen uptake. An exercise program improves oxygen consumption by increasing cardiac output and increasing peripheral oxygen utilization (9). Decrease in resting systolic and diastolic blood pressures can be demonstrated with consistency (10). Moreover, this reduction in blood pressure is more acceptable when obtained by "hygienic means" (ie, weight reduction, dietary salt restriction, exercise, and psychologic behavior treatment) rather than by drug therapy (11).

Musculoskeletal benefits

At least two benefits of exercise on the musculoskeletal system should be emphasized. One is the reduction of muscle fatigue and increased muscle endurance (9). Another is the treatment and retardation of osteoporosis. Stretching exercises, a vital part of every exercise program, increase flexibility and thus help to prevent injury. Exercise also improves coordination and efficiency; tendon strength and bone density increase as a result of repetitive use. Habitual exercise, in the absence of trauma, has not been demonstrated to produce joint disease.

A major benefit to the musculoskeletal system is in the treatment and retardation of osteoporosis (12). Published studies of animal models and humans strongly suggest that physical activity retards or prevents involutional bone loss in both recently postmenopausal and very elderly women. Mechanical, hormonal, and dietary factors act together in the skeleton to increase or decrease the role of senile osteoporosis. The mechanical factors have a definite effect even without the other two factors, although there is obvious synergism.

Metabolic benefits

In the metabolic considerations of the benefit from exercise, at least two major positive elements have been demonstrated. One is the increase in high density lipoprotein cholesterol (HDLC) and the other is increased glucose tolerance.

Sedentary control subjects have been demonstrated to have significantly lower levels of HDLC than joggers and marathoners (13). The differences in HDL-cholesterol levels were not attributed to dietary differences but were believed related to the exercise habits of the group. Joggers in the lower distance range (11 miles per week) had significantly higher HDL levels than inactive subjects. The benefits available through jogging can be achieved by walking.

Physical exercise is known to improve glucose tolerance and diminish insulin requirements in patients with well-controlled diabetes mellitus (14,15). The primary and secondary prevention of coronary artery disease and Type II diabetes mellitus manifestations are given as goals for exercise programs, including those patients age 65 and older (7).

Psychological benefits

Several psychological outcomes that accompany acute and chronic exercise have medical significance (16). Somatic tension reduction is measurable, and there is reliable evaluation of subjective anxiety decrease. Moderate exercise has been shown to be comparable to psychotherapy in diminishing depression and in some instances offers a better prognosis. There has also been association of increased cognitive function with exercise of moderate intensity. This improvement is believed to be for the most part unrelated to anxiety, tension, depression or self-esteem.

Lobstein et al (17) have concluded that physically active men are less depressed and more extroverted than sedentary men. Data support the identification of depression as the most powerful discriminating personality dimension between physically active and sedentary men.

Discussion

Exercise benefits in patients who are not demented have been confirmed in the cardiovascular, musculoskeletal, metabolic, and psychological realms. Less documented evidence is available for the demented patient. It is my belief that these benefits are attainable, at least to some degree, in the patient with Alzheimer's disease or multi-infarct dementia.

The value of exercise will accrue to the demented patient and to the caregivers. The patient should always be accompanied by an attendant. The exercise routine should be followed by the caregiver as well as the patient.

A suggested routine that might be adapted to the individual patient could be the following. Ideally the program should be carried out at least three times per week. I believe that five times a week would be more efficacious. Since the program usually will not reach the standard for fitness given for the healthy individual, an almost daily program would be reasonable.

The daily routine should begin with 8 to 10 min of stretching exercises. For some patients this part of the program may be all that is feasible and the time may be extended. An excellent series of exercises to promote independent living of older patients has been outlined (18). Of course, we are making no attempt at "independent living" for the demented patient, but many of the exercises could be performed, particularly with careful demonstration by the caregiver. Also, some may be done as passive exercise if this becomes necessary.

After stretching exercises as a warm-up, a 12- to 30-min exercise program may be instituted. This may include walking, stationary cycling, or milder forms of exercise, such as extending the arms and rotating, holding on to a chair and swinging one leg, etc. Some of the exercises mentioned for the warm-up phase could be extended into this phase if that proves to be the best approach for a given patient. This type of exercise has been used in a small group of geriatric mental patients who showed significant improvement in heart rate at rest, and during exercise recovery; balancing ability; total daily activity level; and self-care inventory (19). Emes has demonstrated the value of light exercise in 24 patients

from 63 to 81 years of age (mean = 77.3 yrs) (20). A 45-min program three times per week for 20 weeks was followed. There was significant weight loss, a decrease in heart rate at rest, and for the same physical activity, decrease in blood pressure, before and after exercising.

After an exercise period that is strenuous enough to produce an increased heart rate, increased respiratory rate, and significant perspiration, there should be a cool-down period of at least 4 to 6 min. Once again, there should be the stretching exercises that are vital to continued flexibility.

Conclusion

The idea has been presented that one means of attempting to achieve desirable goals for the patient with Alzheimer's disease and multi-infarct dementia can be an exercise program individualized for each patient. The active involvement and participation of the caregiver in the program is essential and, we believe, beneficial to both.

REFERENCES

1. Engel G: The clinical applications of the biopsychosocial model, in Haug MR (ed): Elderly Patients and Their Doctors. New York, Springer Publishing, 1981, p 3.
2. Hutton JT: Senile dementia of the Alzheimer type: proceedings of the Fifth Tarbox Symposium, in Hutton JT, Kenny AD (eds): Norman Rockwell Conference on Alzheimer's Disease (1984, Lubbock, Tex). New York, Liss, 1985.
3. Glosser G, Wexler D, Balmelli M: Physicians' and families' perspectives on the medical management of dementia. J Am Geriatr Soc 33(6):383–391, 1985.
4. Mace NL, Rabins PV: The 36-hour day: a family guide to caring for persons with Alzheimer's disease, related dementing illnesses, and memory loss in later life. Baltimore, John Hopkins University Press, 1981.
5. Bortz WM 2nd: The disuse syndrome. West J Med 141(5):691–694, 1984.
6. Sherin K: Aerobic exercise. Can you answer the questions your patients ask? Postgrad Med 73(6):157–159, 162–164, 1983.
7. Richard J, Droz P, Bizzini L: Current approaches to treatment of the psychologically handicapped elderly, in Wertheimer J, Marois M (eds): Senile Dementia, Outlook for the Future. New York, Liss, 1984, pp 253–265.
8. Haskell WL, Montoye HJ, Orenstein D: Physical activity and exercise to achieve health-related physical fitness components. Public Health Rep 100(2):202–212, 1985.
9. Simon H: Sports medicine. Curr Topics in Medicine. Scientific American Medicine 1985.
10. Gluck FW Jr: Exercises in the elderly—benefits, precautions and recommendations. J Tenn Med Assoc 78(3):162–163, 1985.
11. Aagard G: Management of hypertension in the elderly. Postgrad Med 76:61–67, 1984.
12. Yeater RA, Martin RB: Senile osteoporosis. The effects of exercise. Postgrad Med 75(2):147–159, 1984.
13. Hartung GH, Foreyt JP, Mitchell RE, et al: Relation of diet to high-density-lipoprotein cholesterol in middle-aged marathon runners, joggers, and inactive men. N Engl J Med 302(7):357–361, 1980.
14. Pedersen O, Beck-Nielsen H, Heding L: Increased insulin receptors after exercise in patients with insulin-dependent diabetes mellitus. N Engl J Med 302(16):886–892, 1980.
15. Richter EA, Rudderman NB, Schneider SH: Diabetes and exercise. Am J Med 70(1):201–209, 1981.
16. Dishman R: Medical psychology in exercise and sport. Med Clin North Am 69:123–149, 1985.
17. Lobstein DD, Mosbacher BJ, Ismail AH: Depression as a powerful discriminator between physically active and sedentary middle-aged men. J Psychosom Res 27(1):69–76, 1983.
18. Lönnerblad L: Exercises to promote independent living in older patients. Geriatrics 39(2):93–101, 1984.
19. Clark BA, Wade MG, Massey BH, et al: Response of institutionalized geriatric mental patients to a twelve-week program of regular physical activity. J Gerontol 30(5):565–573, 1975.
20. Emes CG: The effects of a regular program of light exercise on seniors. J Sports Med Phys Fitness 19(2):185–190, 1979.

JOANN L. SHROYER, PHD
J. THOMAS HUTTON, MD, PHD
GEORGINA M. ANDERSON, MS

The Alzheimer patient: interior design considerations

JoAnn L. Shroyer, PhD, and Georgina M. Anderson, PhD, Department of Merchandising, Environmental Design and Consumer Economics, College of Home Economics, Texas Tech University, Lubbock, TX 79409; J. Thomas Hutton, MD, PhD, Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock. Send reprint requests to Dr Shroyer.

The appropriate design of the home and long-term-care institutions for patients with Alzheimer's disease is of growing importance in view of the dramatic increase in the prevalence of this disorder. Recommendations based on observational and interview data are made in an effort to reduce environmental confusion, promote independence, and reduce the risks of injury and undue anxiety in the patient with Alzheimer's disease.

Individuals suffering from Alzheimer's disease experience memory loss, disorientation, deteriorating ability to perform normal physical activities, a decrease in ability to remember details, impairment in judgment, and difficulty in verbal expression. Each of these factors has important consequences for health care professionals, designers, and families who may need to modify the physical and social environment to meet the needs of this special group.

Despite the larger number of older individuals who are affected by Alzheimer's disease or other dementing illnesses, recent studies have not specifically addressed the environmental design requirements of Alzheimer's disease victims. Although recent US government hearings and reports suggest that social and organizational characteristics of institutions could postpone the time when the patient with Alzheimer's disease becomes bedridden and needs skilled nursing care, there appears to be minimal recognition of the possible impact of designed environments, both home and institutional, on the functioning and well-being of these individuals (1,2). As a result, more caregivers are requesting advice about practical strategies that may reduce confusion or injury to the patient with Alzheimer's disease and prolong home care.

Although conjecture exists among behavioral and medical scientists as to a clear cause-and-effect relationship between the housing environment and behavior and mental and physical health, certain assumptions, based on animal research, human observation, behavior mapping, and user perception surveys, seem to be generally well accepted. Although many of the conclusions are based on observations in mental facilities, the findings are applicable to some degree to other environments. Analogies can also be drawn from studies of the effects of the home environment on the cognitive development of children. These investigations have assessed factors such as the organization of the physical and temporal environments and the opportunities for variety in daily stimulation (3). These research studies may have important implications for the design of prosthetic environments for patients with Alzheimer's disease who may be experiencing a variety of physical problems. For example, impairment of orientation and judgment suggests a highly structured or formal framework underlying the use of life-spaces. Researchers have identified several environmental variables that are consistently deficient, including illumination, color, furnishings and layout, textiles, architectural features, and climate control (4). Any one of the elements, if problematic or inappropriately applied, can further complicate the life of an individual with dementia. Not only may certain environmental features be a threat to safety, but they may produce anxiety which can amplify cognitive deficits (5). Cohen (6) noted that behavioral approaches (eg, using environmental cues) can have some advantages over drugs in the treatment of cognitive impairments common in dementia of the Alzheimer type. She has further identified the need to review the patient's environment, define potential threats to safety or sources of emotional stress, and search for adaptations. Additional studies have emphasized that encouragement of independence, self-sufficiency, and social interaction is critical to prolonging cognitive functions (7). Concomitant changes in the social environment may also be required to increase the chances that the patient can remain in the home environment and community. It should be apparent that appropriate adaptations can benefit both the patient with Alzheimer's disease and the caregiver/family.

Methods

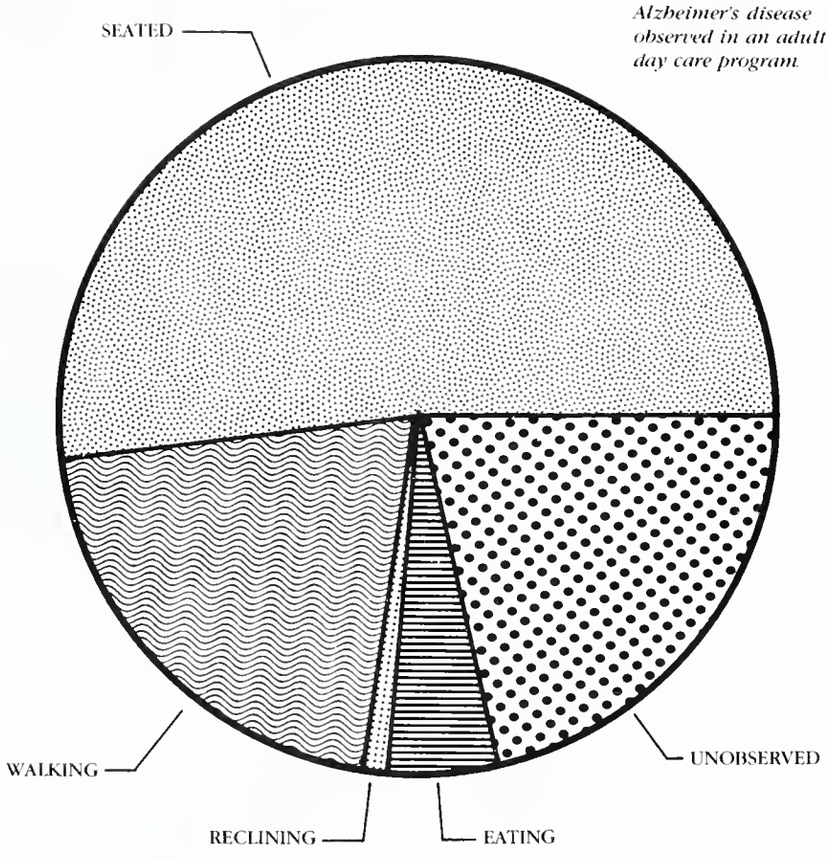
The methods employed consisted of direct observations, qualitative notes, and interviews. The study was conducted at an adult day care center in Lubbock, Tex, which provides care for victims of Alzheimer's disease. To ensure unbiased records of observations, photographic documentation and behavioral maps were used by the investigators. Photographs assisted in recording, analyzing, and communicating visual elements that contributed to the confusion of the Alzheimer's disease victim. Checklists and field journals were also included during the observation process as a means of recognizing mental alertness, global confusion, and spatial orientation of these individuals, and of collecting anthropometric data to aid in the determination of the "fit" between both interior environments and components and patients with Alzheimer's disease. The checklists and journals were also advantageous in identifying specific interior component needs and providing a means for developing a taxonomy for tentative conclusions. Additional information was obtained through personal interviews with program and facilities coordinators, primary caregivers, and physicians, and a thorough review of current literature.

Results

Based upon preliminary data collected, behaviors characteristic of the Alzheimer's disease patient were identified (Fig 1). Observations indicated that the individuals engaged in limited activities at the adult day care center; other than walking to the bathroom or dining room, they remained seated during most of the observation. For the initial part of our study, reported in this article, we observed four individuals for a total of 50 hours. Periods of observation were from 9 am to 2 pm for ten days. Additional studies underway at our institution continue to validate our initial findings:

1. While seated, the individuals napped or sat quietly with hands clasped in lap.
2. While walking, they moved with head and eyes focused straight ahead, often colliding with low objects in their path.
3. When walking from one interior location to another, individuals often placed hands on interior components, such as chair frames, for security.
4. Individuals often paused and hesitated to move through interior doorways.
5. When experiencing changes in floor surfaces, from soft to hard, individuals would often stop and sometimes refuse to continue in the same direction.
6. Individuals appeared to be confused by mirrors and expansive interior and exterior views.
7. Individuals sometimes became confused as to location of bathroom facilities.
8. Individuals did not seek social interaction, and the spatial arrangement did not encourage social interaction.

Based upon literature related to Alzheimer's disease and aging, additional characteristics were identified which should be considered when planning and designing interior spaces for these individuals: Patients forget how to perform routine tasks and may become unable to identify common objects; they may be confused by complex patterns and designs; and they may have increased sensitivity to glare, sharp color contrasts, and changing light conditions.



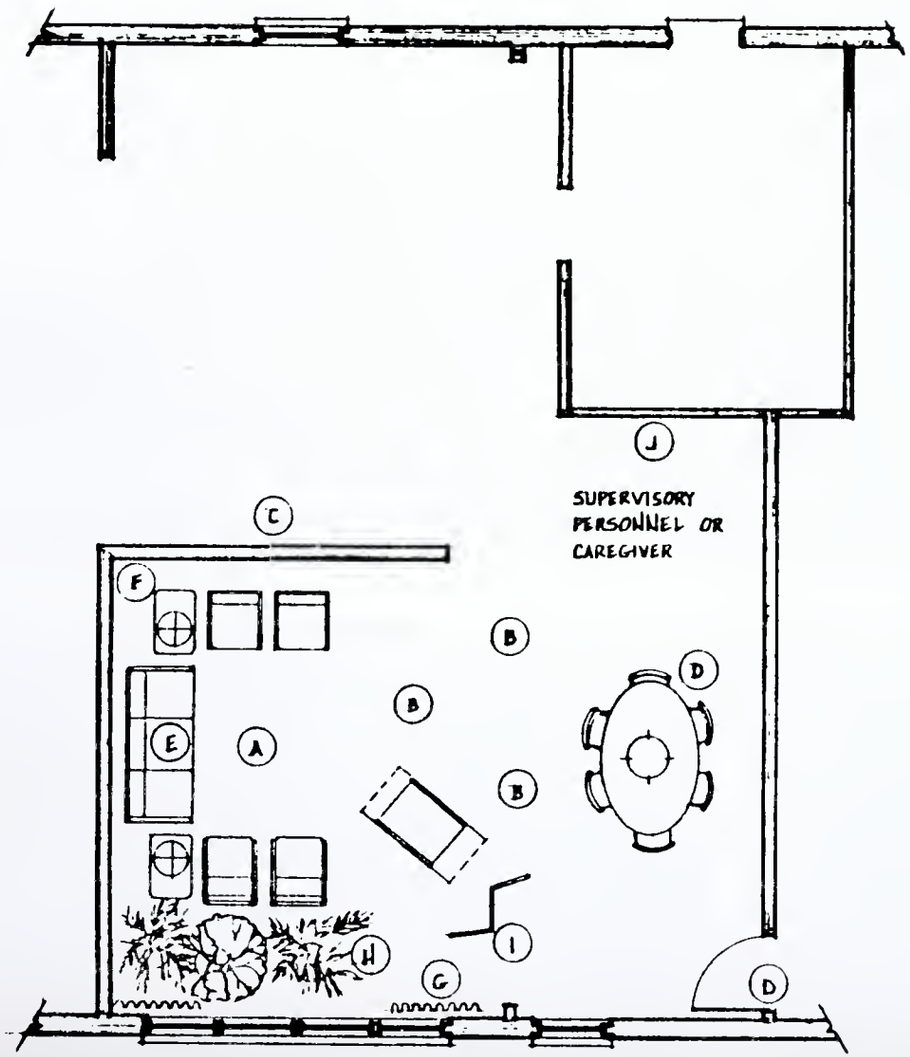
1. Activities of patients with Alzheimer's disease observed in an adult day care program.

Discussion

Designers, planners, and caregivers should consider the practical problems of furniture selection, spatial arrangement, lighting, textures, patterns, color, and architectural features. Interior planning which takes into consideration these variables can promote the health, welfare, and safety of users.

Vision limitations such as farsightedness, decreased ability to adapt to changes in lighting conditions, and an increased sensitivity to glare are not uncommon in the Alzheimer's disease patient. These limitations suggest the need for large design patterns or solid colors in upholstery and textiles for visibility, interest, and appeal. Small design patterns

2. Interior design concepts that may be beneficial to patients with Alzheimer's disease.



SCALE: 1/4" = 1'

INTERIOR DESIGN CONCEPTS

	INTERIOR DESIGN FEATURES	OBJECTIVES
A	CLUSTER FURNITURE ARRANGEMENT	ENCOURAGE SOCIAL INTERACTION PROMOTE SENSE OF SECURITY
B	CIRCULATION PATHS FREE OF LOW OBJECTS	PROMOTE SENSE OF SECURITY & COMPETENCY
C	8' PARTITION TO BLOCK VIEW INTO LARGER SPACE	PROMOTE SENSE OF SECURITY REDUCE SPATIAL-TEMPORAL CONFUSION
D	RESOURCES (DINING & BATHROOM) ARE CLEARLY ACCESSIBLE & AT A DISTANCE CONSISTENT WITH COMPETENCE	REDUCE DISORIENTATION REDUCE CONFUSION
E	CHAIRS & SOFAS WITH ARMS & HIGH STRETCHERS BETWEEN FRONT LEGS; STURDY, NON-COLLAPSIBLE DESIGN FURNITURE WITH ROUNDED CORNERS & EDGES AND UNCOMPLICATED DESIGN	PROMOTE SENSE OF SECURITY PROMOTE PERSONAL SAFETY & WELL-BEING REDUCE CONFUSION
F	PORTABLE TABLE LAMPS FOR HOME-LIKE ATMOSPHERE AND EFFECTIVE, GLARE-FREE ILLUMINATION	ENHANCE SENSE OF SECURITY & WELL-BEING CONTRIBUTE TO SAFETY
G	FULL-LENGTH DRAPERIES FOR TRADITIONAL APPEARANCE AND DAYLIGHT & HEAT CONTROL	PROMOTE SENSE OF SECURITY & WELL-BEING IMPROVE COMFORT CONDITIONS
H	TALL PLANTS FOR AESTHETIC INTEREST AND DIFFUSION OF DAYLIGHT	CONTRIBUTE TO PERSONAL COMFORT REDUCE MONOTONY
I	SCREEN TO REINFORCE CLUSTER ARRANGEMENT AND REDUCE GLARE	ENHANCE PERSONAL COMFORT AND SENSE OF SECURITY
J	SUPERVISORY ACTIVITY CONVENIENTLY LOCATED	CONTRIBUTE TO PERSONAL SAFETY
OTHER:	MINIMIZATION OF DOORWAYS ELIMINATION OF CHANGES IN FLOOR SURFACES AVOIDANCE OF SHARP COLOR CONTRASTS, CONFUSING PATTERNS, FINE DETAIL WARM COLOR SCHEME	REDUCE CONFUSION & FRUSTRATION COMPENSATE FOR AGE-RELATED VISION CHANGES

BY M. ANDERSON

in upholstery and textiles, such as geometric patterns, can produce blurred vision and eye fatigue. The use of larger patterns and hues with higher reflectance values for the furniture upholstery and for other textiles allows the Alzheimer's disease victim to see objects more clearly and thus reduces the probability that he or she will bump into or fall over furniture components.

The Alzheimer's disease victim tends to experience social withdrawal as the disease progresses. Therefore, to encourage social interaction, interior components should be selected and arranged to assist the individual in ease of movement from one area to another. Circulation paths should be easily maneuverable, without obstructions such as low hassocks, footstools, and tables. Sofas and chairs should have wooden or metal arms large enough to permit the individual's hands to easily grasp the arms while sitting and rising. Wooden or metal arms on furniture components also allow the individual to identify the arm of the sofa or chair by touch. The middle sections of sofas are often wasted spaces because the patient cannot reach the sofa's arms. The cushions used on upholstered furniture should be reasonably firm to give the individual added support when rising and sitting.

Summary

As the aging population of the US increases, more emphasis must be directed to their specific needs. The quality of the designed environment is one of the factors critical to their well-being. Although human beings have a great propensity to adapt to less than ideal conditions, the aged, particularly those with Alzheimer's disease, may have more difficulty. The floor plan shown in Fig 2 illustrates recommended interior design features that could enhance the health, welfare, and safety of these individuals.

REFERENCES

1. Alzheimer's disease: Joint Hearing before the Subcommittee on Health and Long-Term Care of the Select Committee on Aging and the Subcommittee on Health and the Environment of the Committee on Energy and Commerce, House of Representatives, 98th Congress, first session. Washington, DC, US Government Printing Office, 1984.

2. Alzheimer's disease: Report of the Secretary's Task Force on Alzheimer's Disease. Rockville, MD, US Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration. Washington, DC, US Government Printing Office, DHHS publication no (ADM) 84–1323, 1984.

3. Elardo R, Bradley RH: The home observation for measurement of the environment (HOME) scale. Development Review 1:113–145, 1981.

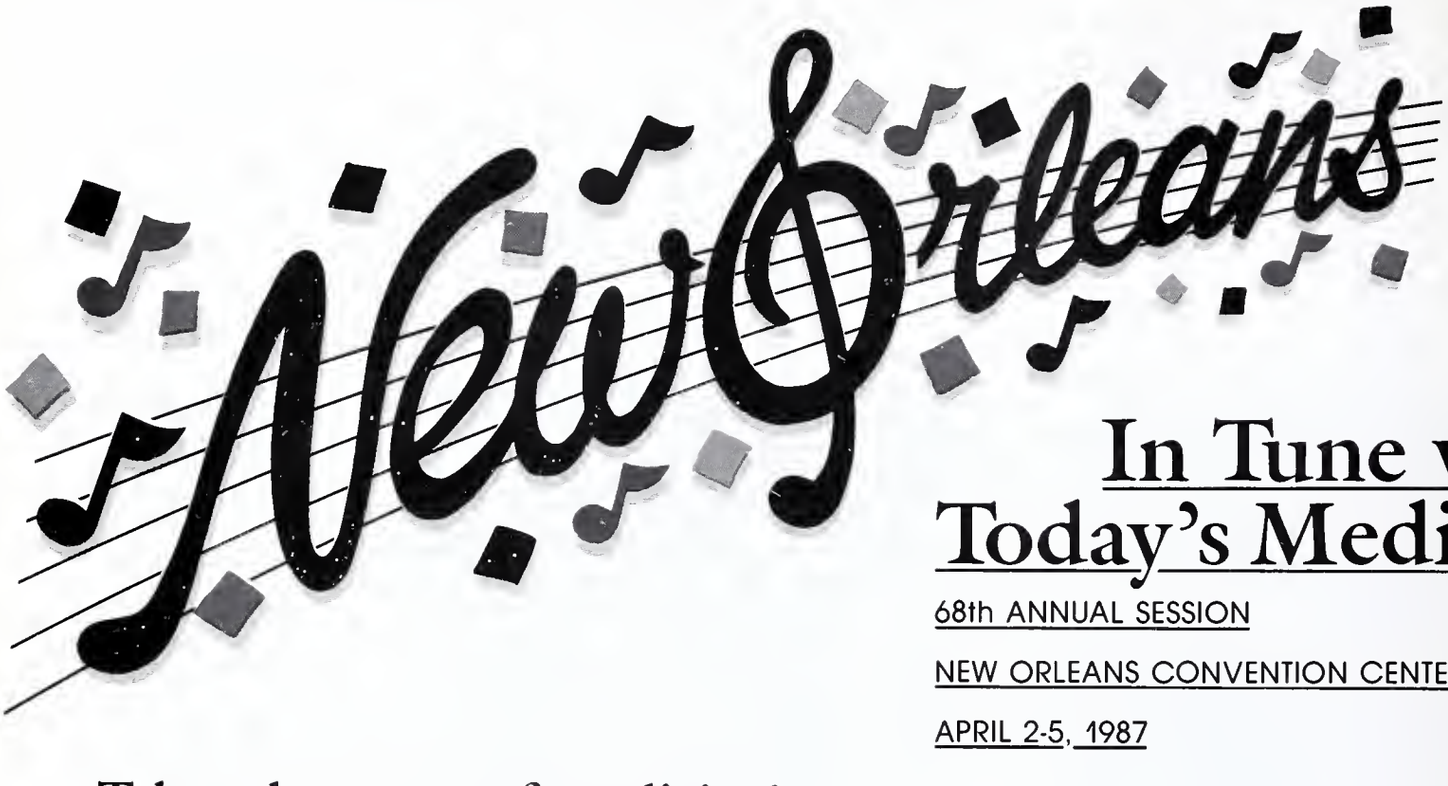
4. Liebowitz B, Lawton MP, Waldman A: Evaluation: designing for confused elderly people. AIA Journal 2:59–61, 1979.

5. Weldon S, Yesavage JA: Behavioral improvement with relaxation training in senile dementia. Clinical Gerontologist 1(1):45–49, 1982.

6. Cohen GD: The mental health professional and Alzheimer patient. Hosp Community Psychiatry 35(2): 115–116, 122, 1984.

7. Reifler BV, Wu S: Managing families of the demented elderly. J Fam Pract 14(6):1051–1056, 1982.

American College of Physicians presents:



In Tune with Today's Medicine

68th ANNUAL SESSION

NEW ORLEANS CONVENTION CENTER

APRIL 2-5, 1987

Take advantage of medicine's educational opportunity of the year.

Over 300 scientific presentations by some of the most respected names in internal medicine.

- Plan your own curriculum, choosing topics, faculty, and program formats best suited to your individual needs.
- Discuss problem cases with medicine's leading clinicians and educators.
- Hear Robert Gale, MD discuss his experience in Chernobyl.
- Learn the clinical implications of "How Cells Talk to Each Other."
- Choose from three Pre-Session courses on Critical Care, AIDS, or Management of Acute Myocardial Infarction.

Bring your spouse and family for what promises to be a memorable event in one of America's favorite cities.

Send for your 1987 Annual Session Scientific Program Guide.

The Scientific Program Guide with schedules, faculty listings, registration forms, and spouse/guest activities is your key to planning the most valuable, personalized Session possible. Request your Guide today using the coupon at right. Many popular programs fill up quickly, so you'll want to start planning your curriculum soon. Be assured of attending the presentations that will benefit you most.

YES, please mail me the '87 Program Guide.

PLEASE PRINT

NAME

ADDRESS

CITY/STATE/ZIP

Telephone toll-free: (800) 523-1546 ext. 3675
In Pennsylvania: (215) 243-1200 ext. 3675

☐ ACP member Membership #: _ _ _ _ _ _ _

☐ non-member

American College of Physicians
4200 Pine Street, Philadelphia, PA 19104 M

Alzheimer's disease resource directory

This resource directory was compiled by Anne Bayne Jones, Region VI Administration on Aging, Dallas, and Beverly Miller, Texas Tech Alzheimer's Disease Center, Lubbock. In addition to the groups and agencies listed here, other organizations may provide information of benefit to Alzheimer's disease patients and their families. Readers of *Texas Medicine* are asked to submit information about such organizations to the journal's editorial offices at 1801 N Lamar Blvd, Austin, TX 78701. New listings will be published in a forthcoming issue of the journal.

ABILENE

Abilene Alzheimer's Disease Family Support Group
c/o Frances Cadenhead
PO Box 3344
Abilene, TX 79604
915-677-1556 or 915-692-7089 (Vi Stahl)

Meeting place:
West Texas Rehabilitation Center (Conference Room)
4601 Hartford
Abilene

AMARILLO

ADRDA Amarillo Chapter
c/o Becky McGee
1410 B West 8th
Amarillo, TX 79101
806-381-1010 or 806-372-8693

Meeting place:
Texas Tech Health Science Center
1400 Wallace Blvd
Amarillo

AUSTIN

Alzheimer's Disease and Related Disorders Association, Inc.
c/o Roy Craig, President
PO Box 14334
Austin, TX 78761
512-454-5476

Meeting place
University Presbyterian Church
2203 San Antonio
Austin

BEAUMONT/PORT ARTHUR

Alzheimer's Disease and Related Disorders Association, Inc, Greater Beaumont Affiliate
c/o Beverly Smythia
PO Box 2002
Beaumont, TX 77706
409-898-0836

Meeting place:
Trinity United Methodist Church
19th and Harrison
Beaumont

BRENHAM/BRYAN

Brenham Alzheimer's Disease Information Group
c/o Jane Donaldson
PO Drawer 4128
Bryan, TX 77805-4128
800-392-5563

Meeting place:
Brenham Community Hall
Brenham

BRYAN

Brazos Valley Alzheimer's Disease Family Support Group
c/o Weston Harper, President
1103 Berkeley
College Station, TX 77840
409-696-8521 or 800-392-5563

Meeting place:
College Station Community Center
1300 Jersey
College Station

CARROLLTON

Metrocrest Alzheimer's Disease Support Group
c/o Cindy Smith
Carrollton Office on Aging
1508 Beltline Rd, Suite 102
Carrollton, TX 75006
214-242-4464

Meeting place:
Farmer's Branch Community Building
2919 Amber
Farmer's Branch

CLEBURNE

Alzheimer's Support Group
c/o Pat Bonds, Assistant Administrator of Customer Services
Walls Regional Hospital (Meeting place)
Highway 67 West
201 Walls Dr
Cleburne, TX 76031
817-645-9181

COLUMBUS

Columbus Area Support Group
c/o Margie Kneblik
420 Walnut St
Columbus, TX 78934
409-732-2332

Meeting place:
Mansfield Library
Columbus

CONROE

East Texas Support Group
c/o Deborah Wilson
228 Cumberland Trail
Conroe, TX 77302
409-273-1675 (weekdays)

Meeting place:
Montgomery County Medical Center Hospital Auditorium
504 Medical Center Blvd
Conroe

CORPUS CHRISTI

Alzheimer's Disease and Related Disorders Association, Inc.
Corpus Christi Chapter
c/o Evelyn Pritchard, Treasurer
PO Box 2294
Corpus Christi, TX 78403
512-887-7111

Meeting place:
Hillhaven Convalescent Home
1314 3rd St
Corpus Christi

and

Westwood Manor Nursing Home
801 Kentwell
Corpus Christi

DALLAS

Alzheimer's Disease and Related Disorders Association, Inc
Greater Dallas Chapter
c/o Valerie Stephenson
2727 Inwood Rd, Suite 228
Dallas, TX 75235
214-956-7101

Meeting place:
University of Texas Health Science Center
Room D1-602, Plaza Building
5323 Harry Hines Blvd
Dallas

EL PASO

ADRDA El Paso Chapter
c/o Dr Jon L. Daniels, President
PO Box 12724
El Paso, TX 79913
915-584-4810

Meeting place:
600 Chelsea St
El Paso

FORT HOOD

Killeen Area Support Group
Sgt James Turpin, Coordinator
Social Work Services
Darnall Army Community Hospital
Fort Hood, TX 76544
817-288-8470

Meeting place:
Darnall Army Community Hospital
Third Floor
East Wing

FORT WORTH

ADRDA Tarrant County Chapter
c/o Janet Pacatte, President
University Christian Church
2720 South University
Fort Worth, TX 76109
817-926-8715

Meeting place:
Texas College of Osteopathic Medicine
Camp Bowie at Montgomery
Fort Worth

FRIENDSWOOD

Bay Area Alzheimer's Disease Support Group
c/o Edgar D. Rauch
P.O. Box 78
Friendswood, TX 77546
713-482-1700

Meeting place:
St John's Hospital
Nassau Bay

GALVESTON

Galveston ADRDA Support Group
c/o Karen Knie-Cahana
2228 Seawall Blvd
Galveston, TX 77550
409-765-4402

Meeting place:
Moody House Ballroom
2228 Seawall
Galveston

HAMILTON

Hamilton Area Alzheimer's Disease Support Group
514 North Rice
Hamilton, TX 76531
817-386-8782

Meeting place:
Senior Citizens Building
Hamilton

HARLINGEN (See listing under LaFeria)

HOUSTON

Alzheimer's Disease and Related Disorders Association, Inc
c/o Harry Walker
6100 Hillcroft, Suite 108
Houston, TX 77081
713-995-5800

Meeting place:
Parish Hall
St Vincent de Paul Church
Holcomb Blvd at Buffalo Speedway
Houston

Heights Hospital Alzheimer Support Group
c/o Rod Brace or Vicki Keiser
1917 Ashland
Houston, TX 77008
713-688-6454 Vicki Keiser
713-861-6161 Rod Brace

Meeting place:
Heights Hospital, 4th floor solarium
Houston

Northwest Houston Alzheimer Support Group
c/o Laurie Whitlow
10906 Fawnview Drive
Houston, TX 77070
713-469-5191

Meeting place:
Prince of Peace Catholic Church
FM 149
Houston

VA Medical Center Alzheimer Support Group (Participants and guests are not required to be veterans.)
c/o Pauline Skinner
2002 Holcomb Blvd
Houston 77211
713-795-7432 ext 3489 pager 312

Meeting place:
Room 125, VA Medical Center
Houston

(Also see Friendswood, Memorial City, and Pasadena listings.)

JASPER

Jasper Alzheimer's Support Group
c/o Anne Pratt
274 E Lamar St
Jasper, TX 75951
409-384-5704

Meeting place:
Jasper Memorial Hospital
1275 S 2nd St
Jasper

KILLEEN (See listing under Fort Hood.)

LaFERIA

Rio Grande Valley Alzheimer's Support Group
c/o Mattie Robinson or
c/o Rhoda Sheetz
Golden Pond

2101 Treasure Hills Blvd#505
Harlingen, TX 78550
512-797-2360 Mattie Robinson
512-428-8868 Rhoda Sheetz

Meeting place:
First Presbyterian Church
LaFeria

LUBBOCK

Lubbock Alzheimer's Disease Support Group
c/o Stanley and Susan Tucker
3241 94th St
Lubbock, TX 79423
806-797-3799

Meeting place:
Texas Tech University Health Sciences Center
Room 5B148B
Lubbock

McALLEN

Shannon Foundation Support Group
c/o Victoria Shannon
PO Box 1925
McAllen 78502
512-585-5995

Meeting place:
Charter Palms Hospital
1421 E Jackson
McAllen

MEMORIAL CITY

Memorial City Alzheimer's Support Group
c/o Sara Blummer
1239 Chantilly Lane
Houston 77018
713-686-3096

Meeting place:
Memorial City Hospital
920 Frostwood
First Floor Conference Room
Memorial City

NASSAU BAY (See Friendswood listing.)

PASADENA

Pasadena Alzheimer's Disease Support Group
c/o Muriel Kuykendall
Pasadena General Hospital
1004 Seymour
Pasadena, TX 77506
713-473-1771

Meeting place:
Pasadena General Hospital Auditorium
Pasadena

SAN ANTONIO

Alzheimer's Disease Family Support Group of San Antonio
c/o Mary Fletcher
PO Box 29342
San Antonio, TX 78229
512-271-0107

Meeting place:
Alamo Heights Presbyterian Church
6201 Broadway
San Antonio

SHEPARD AIR FORCE BASE (See Wichita Falls listing.)

TEMPLE

Temple Alzheimer's Disease Family Support Group
c/o Mrs Anise Vance, Volunteer Coordinator
2613 Forest Trail Drive
Temple, TX 76502
817-771-4548

Meeting place:
VA Nursing Home Care Unit
1901 S 1st St
Temple

TEXARKANA

Texarkana Alzheimer's Support Group
c/o Murray L. James
1622 West Street
Texarkana, TX 75501
214-794-2738 OR 214-792-8040

TYLER

Alzheimer's Family Support Group
c/o Pat Cook
Rt 21, Box 908
Tyler, TX 75709
214-534-2940

Meeting place:
Texas Power & Light Building
1600 S Broadway
Tyler

WICHITA FALLS

North Texas Alzheimer's Disease Family Support Group
c/o Pete Slatton or Sheri Schmitt
Alzheimer's Disease Diagnostic Center
(Meeting place)
708 Denver
Wichita Falls, TX 76301
817-872-1131 or 817-855-6628

WOODVILLE

Woodville Alzheimer's Support Group
c/o Frank Chesser
PO Box 15
Campus Grove
Woodville, TX 75879
409-429-3307

Meeting place:
Holiday Pines Manor Nursing Home
Woodville

STATE AGENCIES AND ASSOCIATIONS

Morris Craig, Alzheimer Program Coordinator
Texas Department of Health
Chronic Disease Prevention and Control
1100 West 49th St
Austin, TX 78756-3199
512-458-7534

Charlene Stowers, Information Officer
Bureau of Long-Term Care
Texas Deprtment of Health
1100 West 49th St
Austin, TX 78756-3199
800-252-9106

John F. Willis, State Long-Term Care Ombudsman
Texas Department on Aging
PO Box 12786
Capitol Station
Austin, TX 78711
800-252-9240 or 512-444-2727

William Larowe
Texas State Bar Association
Lawyer Referral Service
1414 Colorado
Austin, TX 78702
512-463-1463

Medicaid State Office
PO Box 2960, Mail Stop 600-W
Austin, TX 78769
512-450-3050

Home Health Agency Providers
(Visiting Nurses Association included)
Hospital Licensure and Certification Division
Texas Department of Health
1100 West 49th St
Austin, TX 78756-3199
512-458-7245

FEDERAL PROGRAMS

Alzheimer Disease Resource Directory
Administration on Aging
Region VI
1200 Main Tower
Dallas, TX 75202
214-767-2971

FEDERAL INCOME TAX INFORMATION
800-424-1040

MEDICARE BENEFITS
800-442-2620

AREA AGENCIES ON AGING

Frank Adamo, Director
Alamo Area Agency on Aging
118 Broadway, Suite 400
San Antonio, TX 78205
512-225-5201
Counties served: Atascosa, Bandera, Comal, Frio, Gillespie, Guadalupe, Karnes Kendall, Kerr, Medina, Wilson

Beverly Cherney Pearson, Director
Ark-Tex Area Agency on Aging
PO Box 5307
Texarkana, TX 75505
214-832-8636
Counties served: Bowie, Cass, Delta, Franklin, Hopkins, Lamar, Morris, Red River, Titus

Minnie Williams, Director
Bexar County Area Agency on Aging
118 Broadway, Suite 400
San Antonio, TX 78205
512-225-5201
Counties served: Bexar

Roberta Lindquist, Director
Brazos Valley Area Agency on Aging
3006 E 29th St
PO Drawer 4128
Bryan, TX 77805-4128
800-392-5563 or 409-776-2277
Counties served: Brazos, Burleson, Grimes, Leon, Madison, Robertson, Washington

Andriette Short, Director
Capital Area Agency on Aging
2520 IH 35 South, Suite 100
Austin, TX 78704
512-443-7653
Counties served: Bastrop, Blanco, Burnet, Caldwell, Fayette, Hayes, Lee, Llano, Travis, Williamson

Margareta Williams, Director
Central Texas Area Agency on Aging
PO Box 729
Belton, TX 76513
817-939-1886
Counties served: Bell, Coryell, Hamilton, Lampasas, Milam, Mills, San Saba

Ivan Arceneaux, Director
Coastal Bend Area Agency on Aging
2910 Leopard St
PO Box 9909
Corpus Christi, TX 78469
512-883-5743
Counties served: Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleburg, Live Oak, McMullen, Nueces, Refugio, San Patricio

Cathryn Haren, Director
Concho Valley Area Agency on Aging
5002 Knickerbocker
PO Box 60050
San Angelo, TX 76906
915-944-9666
Counties served: Coke, Concho, Crockett, Irion, Kimble, Mason, McCulloch, Menard, Reagan, Schliecher, Sterling, Sutton, Tom Green

Norman Moorehead, Project Director
Dallas County Area on Aging
2121 Main St, Suite 500
Dallas, TX 75201-4321
214-741-5851
Counties served: Dallas

Martha Jones, Director
Deep East Texas Area Agency on Aging
274 E Lamar St
Jasper, TX 75951
409-384-5704 or 800-442-ELDERS
Counties served: Angelina, Houston, Jasper, Nacogdoches, Newton, Polk, Sabine, San Augustine, San Jacinto, Shelby, Trinity Tyler

Claude Andrews, Director
East Texas Area Agency on Aging
Kilgore, TX 75662
214-984-8641 or 800-442-8845
Counties served: Anderson, Camp, Cherokee, Gregg, Harrison, Henderson, Marion, Panola, Rains, Rusk, Smith, Upshur, Van Zandt, Wood

Patrick Kennedy, Director
Gold Crescent Area Agency on Aging
PO Box 2028
Victoria, TX 77902
512-578-1587 or 800-292-1565
Counties served: Calhoun, DeWitt, Goliad, Gonzales, Jackson, Lavaca, Victoria

Antoinette Samuel, Director
Harris County Area Agency on Aging
806 Main, Third Floor
Houston, TX 77002
713-222-5691
Counties served: Harris

Hazel Limback-Gruetzner, Director
Heart of Texas Area Agency on Aging
320 Franklin Ave
Waco, TX 76701
817-756-6631
Counties served: Bosque, Falls, Freestone, Hill, Limestone, McLennan

Rodney Bradshaw, Director
Houston-Galveston Area Agency on Aging
3555 Timmons Lane, Suite 500
Houston, TX 77027
713-627-3200

Counties Served: Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Liberty, Matagorda, Montgomery, Walker, Waller, Wharton

Leo Garcia, Director
Lower Rio Grande Valley Area Agency on Aging
Texas Commerce Bank Building, Suite 707
1701 W Business Hwy 83
McAllen, TX 78501
512-682-3481
Counties served: Cameron, Hidalgo, Willacy

Estella Hernandez, Director
Middle Rio Grande Area Agency on Aging
403 E Nopal
PO Box 1199
Carrizo Springs, TX 78834
512-876-3533
Counties served: Dimmitt, Edward, Kinney, LaSalle, Maverick, Real, Uvalde, Val Verde, Zavala

Wilma Morgan, Director
North Central Texas Area Agency on Aging
Centerpoint Two, Second Floor
616 Six Flags Drive
PO Drawer COG
Arlington, TX 76005-5888
817-640-3300
Counties served: Collin, Denton, Ellis, Erath, Hood, Hunt, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwall, Somervell, Wise

Lila Reed, Director
North Texas Area Agency on Aging
2101 Kemp Blvd
PO Box 5144
Wichita Falls, TX 76307
817—322-5281
Counties served: Archer, Baylor, Childress, Clay, Cottle, Foard, Hardeman, Jack, Montague, Wichita, Wilbarger, Young

Mieke McQueen, director
Panhandle Area Agency on Aging
2736 W 10th
PO Box 9257
Amarillo, TX 79105
806-372-3381
Counties served: Armstrong, Briscoe, Carson, Castro, Collingsworth, Dallam, Deaf Smith, Donley, Gray, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, Wheeler

W.E. Smith, Director
Permian Basin Area Agency on Aging
2514 Pliska Dr
PO Box 6391
Midland, TX 79711
915-563-106
Counties served: Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, Winkler

Joyce Philen, Director
Southeast Texas Area Agency on Aging
3800 Hwy 365, Suite 113
PO Drawer 1387
Nederland, TX 77627
409-727-2384 or 800-392-0055
Counties served: Hardin, Jefferson, Orange

Robert Marshall, Director
South Plains Area Agency on Aging
1323 58th
PO Box 3730
Freedom Station
Lubbock, TX 79452
806-762-8721 or 800-858-1809
Counties served: Bailey, Cochran, Crosby, Dickens, Floyd, Garza, Hale, Hockley, King, Lamb, Lubbock, Lynn, Motley, Terry, Yoakum

Andy Smith, Director
South Texas Area Agency on Aging
600 S Sandman
PO Box 2187
Laredo, TX 78044-2187
512-722-3995 or 800-292-5426
Counties served: Jim Hogg, Starr, Zapata, Webb

Victoria Klinzing, Director
Tarrant County Area Agency on Aging
210 E Ninth St
Fort Worth, TX 76102
817-335-3473
Counties served: Tarrant

Janis Gray, Director
Texoma Area Agency on Aging
10000 Grayson Dr
Denison, TX 75020
214-786-2955
Counties served: Cooke, Fannin, Grayson

Lewis Lemmond, PhD, Director
West Central Texas Area Agency on Aging
1025 East North 10th St
PO Box 3195
Abilene, TX 79604
915-672-8544
Counties served: Brown, Callahan, Coleman, Comanche, Eastland, Fisher, Haskell, Jones, Kent, Knox, Mitchell, Nolan, Runnels, Scurry, Shackelford, Stephens, Stonewall, Taylor, Throckmorton

Rosemary Castillo, Director
West Texas Area Agency on Aging
The Center
123 Pioneer Plaza, Suite 210
El Paso, TX 79901
915-533-0998
Counties served: Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, Presidio

Texas Tech Alzheimer Disease Center
Department of Medical and Surgical Neurology
Texas Tech University Health Sciences Center
4th Street and Indiana
Lubbock, TX 79430
806-743-2391

J. Thomas Hutton, MD, PhD, Director
Memory Disorders Clinic
806-743-2391

Alzheimer Autopsy Service
Department of Pathology
806-743-2155

Alzheimer Therapy Group (for caregivers)
Department of Psychology
806-742-3737

Laura Wilson, PhD, Director
Southwest Long-term Gerontology Center
University of Texas Health Sciences Center at Dallas
5323 Harry Hines Blvd
Dallas, TX 75235
214-688-2823

Myron Weiner, MD, Psychiatrist
Southwest Alzheimer Disease Evaluation Unit
University of Texas Health Sciences Center at Dallas
Dallas, TX 75235
214-688-3400

Charles White, MD, Neuropathologist
University of Texas Health Sciences Center at Dallas
5323 Harry Hines Blvd
Dallas, TX 75235
214-688-2148

Harry Lipscomb, MD
Texas A&M College of Medicine
Adult Neurology Clinic
Scott and White Hospital
Temple, TX
817-774-2465

ADDITIONAL ALZHEIMER AUTOPSY INFORMATION

Judy Carella, MA, MPH
Alzheimer Disease and Related Disorders Association
Region VIII, Autopsy Assistance Network
Oklahoma Medical Research Foundation
825 NE 13th St
Oklahoma City, OK
405-271-7480
(Provides information about autopsy availability in Arkansas,Louisiana, New Mexico, Oklahoma, and Texas. Regional representatives are listed below.)

Mary Link
North Texas Autopsy Network Representative
6432 Barkwood Lane
Dallas, TX 75248
214-661-3469

Virginia Jacobson
South Texas Autopsy Network Representative
3134 Catcay
Corpus Christi, TX 78418
512-937-0108

He walked away a different person.

Diagnosis: Traumatic Brain Injury

He looks quite normal. But he sees life quite differently. He suffered a traumatic brain injury and simply doesn't recognize what is socially acceptable behavior and what isn't. Mentally he's a different person.

For him to have any hope of returning to his family and community, he requires a highly structured form of therapy. At Warm Springs Rehabilitation Hospital, he has the benefit of a traumatic brain injury program that includes speech, occupational and physical therapies along with therapeutic recreation, psychological counseling and social services. His daily routine is tightly controlled every hour of every day of every week.

Obviously, not every traumatic brain injury is exactly like this one. Warm Springs, with over 40 years of rehabilitation experience, has a traumatic brain injury team that customizes each program to meet the individual needs of each patient. The goal of every program is to help the patient put his or her life back into order and to become an active member of society once again.

If you have a patient that has suffered a traumatic brain injury, contact Dr. Larry Browne and discuss the merits of our rehabilitation program.

WARM SPRINGS REHABILITATION HOSPITAL

P.O. Box 58 • Gonzales, Texas 78629
1-800-292-1440

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Infectious disease in the sella turcica. Stephen A. Berger, Stephen C. Edberg, and Gwen David. Copyright 1986 The University of Chicago Press, *Reviews of Infectious Diseases,* vol 8, no 5, September-Oetober 1986, pp 747–755.

Intrasellar infeetion is eharaeterized by pituitary dysfunetion and damage to surrounding struetures. In most cases, patients have fever, headache, and visual disturbance and exhibit roentgenographie evidenee of a mass. Suppurative infeetions may originate in the paranasal sinuses, meninges, or more distant foei and are commonest in the setting of preexisting pituitary adenomata. Pituitary tubereulosis may arise from hematogenous spread or extension of local lesions and may be confused with a variety of other granulomatous diseases. Congenital and aequired syphilis of the pituitary are more often diagnosed at autopsy or by the eoneurrence of pituitary dysfunetion and serologie evidenee of syphilis. Although viral infeetion may be assoeiated with pituitary or hypothalamic dysfunetion, overt hypophyseal infeetion is rarely doeumented. In eontrast, a variety of parasites and fungi have been found in pituitary tissue. The diagnosis of pituitary infeetion should be eonsidered when signs of intrasellar mass or pituitary dysfunetion are aeeompanied by fever and other evidence of infeetion.

'Crack,' early report on a new drug epidemic. Arnold M. Washton, PhD; Mark S. Gold, MD; and A. Carter Pottash, MD. MeGraw-Hill, *Postgraduate Medicine,* vol 80, no 5, Oetober 1986, pp 52–58.

The popularity of smoking freebase coeaine, or "eraek" has risen precipitously in reeent years because of widespread availability and cheap priees. In this report on a random sample of hotline eallers, the authors suggest a basie treatment plan for abusers of this exeeptionally addictive drug and warn the health care eommunity to prepare for an unpreeedented influx of patients as the problem beeomes even more prevalent.

Tobacco dependence: psychology, biology, and treatment strategies. Lee S. Mann, MA; Robert W. Johnson, MD; and Daniel J. Levine, MD. Cliggott Publishing Company, *Psychosomatics,* vol 27, no 10, October 1986, pp 713–718.

Various techniques have been tried to help the smoker stop smoking, and treatment is superior to no treatment; but results continue to be disappointing. Behavioral speeialists have many different teehniques at their disposal, but more researeh is needed in order to inerease sueeess rates and demonstrate whieh techniques are most cost-effective. Nicotine chewing gum may prove to be an important adjunct to treatment programs, by separating the proeess of quitting into eessation of the smoking habit itself and withdrawal from nieotine at a later date. Physieians should not overlook the favorable opportunities available to them to eounsel their patients to cease smoking.

Impact of shockwave lithotripsy on upper urinary tract calculi. Robert A. Riehle, Jr, MD; Erik B. Naslund; William Fair, MD; and E.D. Vaughan, Jr, MD. Professional Medieal Services Company, *Urology,* vol 28, no 4, Oetober 1986, pp 261–269.

Extraeorporeal shoek wave lithotripsy (ESWL) currently is performed in seleeted urologie eenters to treat more than 80% of patients with symptomatie upper urinary tract caleuli. This noninvasive teehnique utilizing shockwaves to disintegrate stones into sand-sized partieles allows the patient to pass the partieles with spontaneous urination and replaees most surgery or percutaneous endoseopy for stone removal. However, stone-free sueeess rates must be individualized depending on stone position, stone size, and composition. Lithotripsy of renal stones before migration and proximal ureteral stones early in their symptomatic eourse may alter significantly the ineidence of distal ureteral caleuli requiring hospitalization, eystoseopy, or ureteroseopy.

Management of diabetes mellitus. David L. Horwitz, MD, PhD. Survey of Ophthalmology, Inc, *Survey of Ophthalmology,* vol 31, no 2, September-Oetober 1986, pp 111–118, 1986.

The past deeade has seen a rapid advaneement in the understanding of diabetes and in the ability to treat it. A new diagnostie elassifieation has been established. Guidelines for diet therapy have been revised. New oral hypoglyeemic agents have been approved for use, and the rationale for using oral agents expanded. Insulin therapy has been expanded by development of human insulin and new modes of injection, ineluding insulin pumps. Several new teehniques are available for monitoring eontrol of diabetes.

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

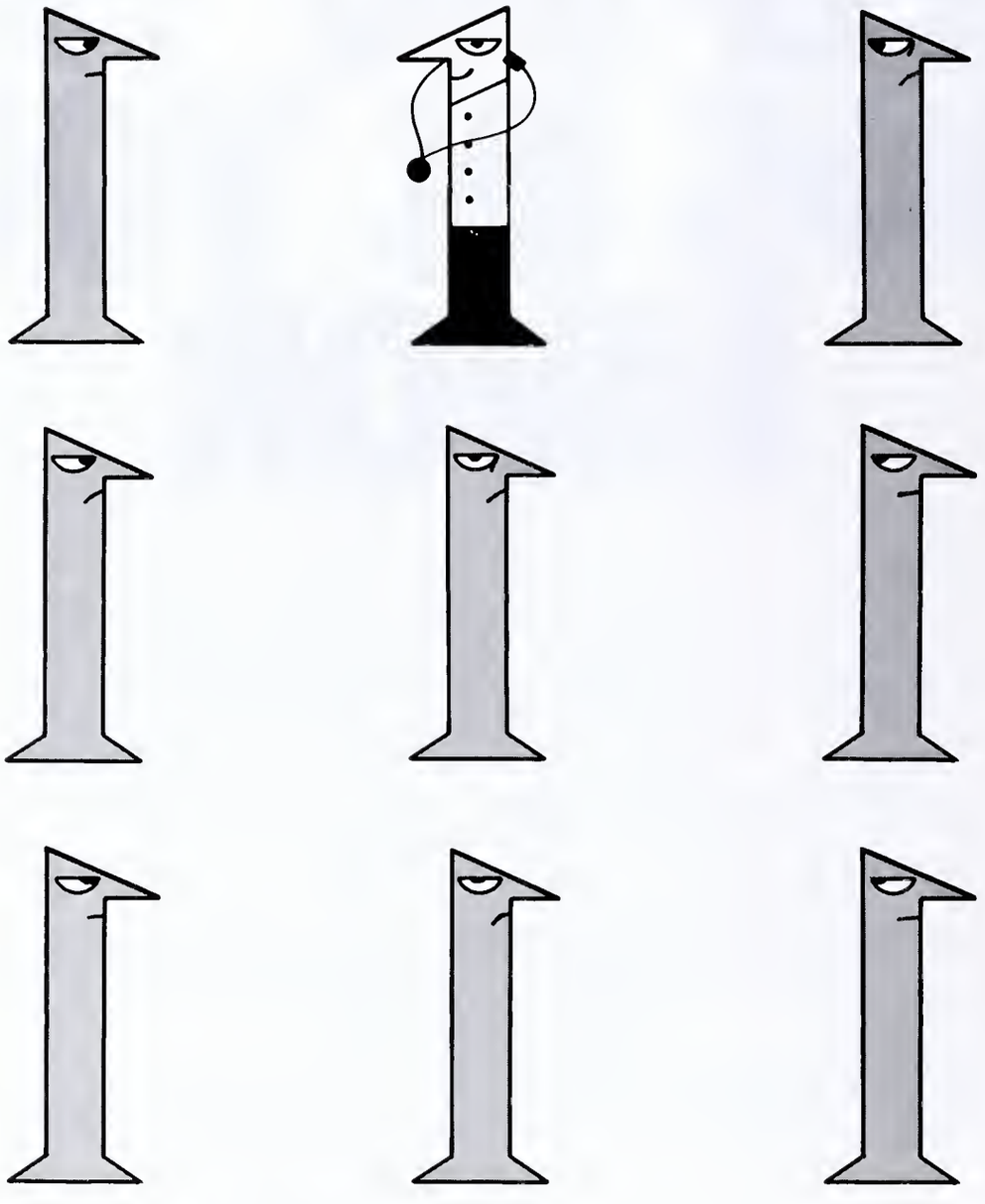
TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS MEDICAL LIABILITY TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

WE'RE THE ONE



AND ONLY auto leasing company endorsed by both the Texas Medical Association and the Tarrant County Medical Society, with good reason. Call our toll-free number for more information.

1-800-442-6158

TRANS-TEXAS LEASING
9330 LBJ Frwy, Suite 635
Dallas, TX 75243
1-214-699-9494

Give your angina patients what they're missing...

CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3]****
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/pasthatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%).

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. ***Issued 7/86***

See complete Professional Use Information before prescribing.

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers. Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983, 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers. Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesowsky R, Human DP, et al. Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease. A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap. 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

Another potent benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0246M6

Feature

PREVIEW
The 70th Texas Legislature

When the 70th Texas Legislature convenes Jan 12, TMA will review and lobby for or against 400 to 500 different pieces of legislation that directly or indirectly affect patient and medical care. The issues are so numerous and so complex that the association's Public Affairs staff, TMA's legislative and political arm, will sort medical legislation by issue areas: maternal and child health, public health, allied health professionals' practice and licensure, medical education, drugs and alcohol, medical finance and reimbursement, the Medical Practice Act, medical professional liability, and mental health. Most medical legislation may become submerged in the two major issues confronting the 70th Legislature: the budget and "everything else." Legislators will grapple with a multibillion-dollar shortfall and face the very real, and particularly painful, prospect of severe budget cuts to the most essential services and *a tax bill that is virtually guaranteed to anger the voting majority of their constituencies.*

However, one package of legislation is an issue unto itself, and will be the primary focus of the association's legislative efforts this session—tort reform. The near universal liability problems that businesses, major industries, professionals, local governments, and school districts are experiencing has fostered a once-in-a-decade opportunity to clarify and reform all the statutes that have to do with damage recovery in Texas' civil justice system.

Tort politics

Asking a legislature to modify the manner in which an injured plaintiff seeks recovery through an insurance company and/or the courthouse precipitates a collision among some of the most influential and well-heeled organizations in Texas. This conflict has sharply focused legislative, media, and, ultimately, public attention on the institutions, agencies, professions and industries integral to Texas' civil justice system. The wide array of legislative proposals that result from this collision roughly can be categorized as changes, or reforms, to tort law, judicial elections, insurance regulation, and professional discipline.

1. Changes to the tort/civil justice system: The Texas Civil Justice League, of which TMA is a founding member, will submit legislation that seeks to more sharply define economic versus noneconomic recovery, limit noneconomic recovery, preempt potential constitutional problems with tort recovery issues, provide a cause of action for nonmeritorious suits, and attach a sliding scale to attorney contingency fees.

2. Court reform: The legislative adventurism of the Texas Supreme Court—emasculating existing tort laws and expanding theories of recovery—and recent legislative inquiries into the conduct of the Texas Supreme Court have brought a renewed impetus to proposals to change the method by which Texas' appellate level judges are elected. Proposals range from a "Missouri plan" (panel appointment) to a modified Missouri plan (appointment with nonpartisan, periodic reelection or recall), to normal reelection cycles on a nonpartisan basis.

3. Insurance reform: Adversaries of tort reform legislation have criticized the cyclical nature of the liability insurance industry and pointed to underwriting practices and excessive reserve requirements as a principal cause of the current liability crisis. Legislators will debate proposals that seek to modify the entire regulatory structure of the liability insurance industry, expanding reporting requirements, disallowing certain expenditures in the rate structure, and mandate rate rollbacks.

4. Professional discipline/risk management: The direct and indirect blame-seeking during the tort reform debate will include finger-pointing at both the medical and legal professions. One adversarial premise has been that inadequate medical discipline is a primary cause of the incidence of malpractice and, consequently, an escalation of insurance costs. Like most state regulatory agencies, the State Board of Medical Examiners has been chronically understaffed and underfunded, creating administrative and regulatory mishaps that were brought to public attention during Senate Nomination Committee hearings for Governor White's nominees to the board. The Texas Medical Association will seek to close a loophole in the medical disciplinary reporting system and strengthen the peer review process by reaffirming immunity from retaliatory suits and allowing recovery of court costs and attorney fees in such suits. TMA's prompt and proactive actions already have drawn praise from legislators. The Texas Medical Association also has suggested that any systemic changes to the State Board of Medical Examiners or the medical disciplinary process could be applied equally to other licensed health professionals and the legal profession. More hostile approaches to this issue include restructuring of the medical board to add more consumers, placing the board under the Attorney General's office, and mandating continuing medical education as a condition of relicensure.

(At press time, the State Board of Medical Examiners announced its intention to recommend that the legislature require physicians to complete 150 credit hours of continuing education every three years.)

Tort political prognosis

Although the majority of the Texas House of Representatives are favorably disposed towards some mix of tort reforms, some influential members in the House leadership could frustrate or redirect legislation during the committee markup and calendar scheduling process. The Senate, however, is sharply divided. A key group of "swing vote" senators, approximately 8 to 10 out of 31, remain neutral. It is upon these key senators that most legislative attention has been and continues to be focused. A best guess among the political professionals is that the key to tort reform is finding the proper mix of tort, insurance, judicial, and professional discipline measures that eventually will persuade undecided members of the House and Senate to support tort reform. (Passage of legislation in the Senate requires a two-thirds vote, while passage in the House requires a simple majority.)

Given a stand-off or a close vote, it is probable that a combined legislative leadership effort will bring about a negotiated mix of reforms. Governor Clements campaigned for tort reform and sent a letter to all Texas physicians during his campaign stating his intent that the legislature will not adjourn without addressing this issue. House Speaker Gib Lewis has indicated his support for a solution, and will give the House its opportunity

to debate and vote on the issue. Attorney General Jim Mattox has actively campaigned against tort reform proposals and has aggressively attacked the insurance industry, blaming it for Texas' liability insurance difficulties. A pivotal leader on this issue is Lt Gov Bill Hobby, the presiding officer in the Senate, whom the 31 senators respect for his fairness and his ability to force politically difficult and complex issues to the negotiation table.

Other medical issues

With public and medical professional attention focused on tort reform, it is easy, not to mention risky, to forget the array of substantive medical legislation that the House and Senate likely will debate. At the risk of over-simplification, the following list scans some of the major issues by category and assesses their political efficacy:

1. Allied health/licensed providers: The escalating economic competition among a wide array of provider groups continues to generate political pressure to expand their respective practice acts into either the practice of medicine or another provider's practice. The most aggressive effort going into this session will come from physical therapists, who will seek independent practice. Psychologists will seek mandatory hospital staff privileges; optometrists will seek independent use of diagnostic, and possibly therapeutic drugs, and several nonlicensed groups will seek licensed status. The Texas Orthopaedic Association, in conjunction with the Texas Medical Association, has retained separate legislative counsel to oppose the independent practice of physical therapy. At press time, Texas pharmacists were not actively seeking a Florida-type bill that would allow them to prescribe from a formulary, or to therapeutically substitute. However, an organization of chain-store pharmacies may seek, for economic reasons, to repeal or modify Texas' generic two-line prescription form. TMA discussions with these and other provider groups this session fortunately has focused largely on areas of common concern, particularly professional liability.

2. Sunsetted agencies: Texas sunsets, or terminates, all agencies on a staggered, 12-year cycle, unless they receive legislative reapproval. Therefore, there is some major health agency considered during virtually every session of the legislature. This year, the Department of Human Services and the Department of Mental Health and Mental Retardation turn into the proverbial pumpkin unless the legislature recreates them. The sunset process invariably means there is potential for major restructuring of any agency's operations, as well as the "piggybacking" of substantive policy changes as the sunset bill travels through the legislative process.

TMA is seeking to expand the board of the Department of Human Services, consolidate its medical services, and mandate that the agency respond to the recommendations of its medical care advisory committee prior to rule-making.

The Texas Society of Psychiatric Physicians and TMA are negotiating a modification to the MHMR physician commissioner requirement, preferring a clearly defined medical control of all mental health programs through the deputy commissioner(s) system. This large and complex agency has fostered numerous issues of medical/psychiatric concern.

3. Public health issues: TMA collaborates with a number of organizations to ensure adequate funding of public and indigent health programs and will support legislation providing charitable immunity for physicians who contract with the Department of Health for primary care services. TMA also will evaluate the need to clarify emergency transfer laws in the Indigent Health Care Act.

4. Maternal and child health: Besides funding issues, TMA will address legislation on lay and nurse midwifery, adolescent pregnancy, birthing centers, and abortion. TMA works closely with the Texas Pediatric Society, the Texas Association of Obstetricians and Gynecologists, and other medical specialty societies on a number of maternal and child health programs, ranging from enclosing swimming pools to reinstating the Texas motorcycle helmet law.

5. Medical education: In addition to working with university representatives on funding concerns, TMA will respond to an anticipated mandate for continuing medical education as a condition to relicensure, and clarify the role of teaching hospitals in providing primary care in urban areas.

6. Socioeconomics and reimbursement issues: Texas' fiscal difficulties and the possibility of another tax-revenue bill will give rise to serious consideration of expanding the tax base to include professional services, which means doctors' fees, along with those of lawyers, engineers, architects, and other professionals.

The sunset of the Department of Human Services has fostered a legislative examination of Texas' Medicaid payment system. Additionally, the carefully negotiated preferred provider organization (PPO) rules from the State Board of Insurance may require enabling legislation, and the Texas Health Maintenance Organization Act will undergo a series of technical "housekeeping" changes.

7. Drugs/alcohol: TMA anticipates legislation regarding mandatory drug testing, an effort to repeal the two-liner on prescription forms, a wide array of anti-drunk driving measures, and, during the MHMR sunset process, evaluation of alcoholism treatment and commitment procedures.

8. Mental health: In addition to the MHMR sunset-generated issues, the professional difference among Texas' array of mental health providers will manifest themselves in legislative bill form. Of particular concern to psychiatrists is mandated hospital privileges for psychologists. The legislators also will consider "duty to warn" legislation, which would require psychiatrists to warn affected persons of potentially harmful actions that their patients could be expected to take. Such legislation has serious implications for patient care and the confidential nature of the physician-patient relationship.

KIM ROSS
Director, TMA Division of Public Affairs

SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA - SUBCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

WANTED: Physicians who prefer medicine to paperwork.

We are looking for dedicated physicians, physicians who want to be, not salesmen, accountants, and lawyers, but physicians. For such physicians, we offer a practice that is practically perfect. In almost no time you experience a spectrum of cases some physicians do not encounter in a lifetime. You work without worrying whether the patient can pay or you will be paid, and you prescribe, not the least care, nor the most defensive care, but the best care.

If that is what you want, join the physicians who have joined the Army. Army Medicine is the perfect setting for the dedicated physician. Army Medicine provides wide-ranging opportunities for the student, the resident, and the practicing physician.

Army Medicine offers fully accredited residencies in virtually every specialty. Army residents generally receive higher compensation and greater responsibility than do their civilian counterparts and score higher on specialty examinations. If you are currently in a residency program such as Orthopedics, Neurosurgery, Urology, General Surgery, or Anesthesiology, you may be eligible for the Army's Sponsorship Program.

Army Medicine offers an attractive alternative to civilian practice. As an Army Officer, you receive substantial compensation, extensive annual paid vacation, a remarkable retirement plan, and the freedom to practice without endless insurance forms, malpractice premiums, and cash flow worries.

Army Medicine: The practice that's practically all medicine.

AMEDD Personnel Counselor
Federal Office Building
Room 9C23
1100 Commerce Street
Dallas, TX 75242-0999
(214) 767-0818

The treating physician as an expert witness

Both as a citizen and as a professional with special training and experience, a physician has an ethical obligation to assist in the administration of justice. If a patient who has a legal claim requests his or her physician's assistance, the physician should furnish medical evidence, with the patient's consent, to help secure his or her legal rights.

A medical witness must not become an advocate or a partisan in the legal proceeding. The medical witness should be adequately prepared and should testify honestly and truthfully. The physician called to serve as a witness should inform the attorney who arranged for the testimony of all favorable and unfavorable information developed during the physician's evaluation of the case. It is unethical for a physician to accept compensation that is contingent upon the outcome of litigation (1).

A patient or a patient's attorney most often asks a physician to testify about the patient's diagnosis and prognosis in order to substantiate a personal injury claim. In Texas, the treating physician usually gives testimony by deposition. In a deposition, a physician answers questions from attorneys representing both sides in a personal injury claim. Their questions relate to the physician's treatment of the patient/plaintiff and his expectations for the patient/plaintiff's medical future. Although a deposition is taken outside the courtroom and is rather informal, the testimony is given under oath and usually is read into evidence during the trial in lieu of a personal appearance by the physician. This article discusses whether a treating physician must testify, who pays for the testimony, and how much compensation is appropriate.

Must a treating physician testify?

As a general rule, every citizen has the duty to give a court whatever information he may have (2). In fact, the court may punish for contempt a witness who refuses to testify or to answer proper questions (3). Generally, witnesses are either fact witnesses or expert witnesses. Anyone who may possess relevant factual information about an issue in litigation may be called as a fact witness. A fact witness has limited capacity to offer opinions and inferences as evidence (4). In contrast, an expert witness is asked specifically for his or her opinion. An expert witness must be qualified to give testimony by reason of knowledge, skill, experience, training, or education.

Thus, a physician may be called as a witness in two capacities: as a fact witness to describe facts he has observed and actual treatment of a patient, and as an expert witness to render an opinion concerning a patient's diagnosis and prognosis. If any person with knowledge regarding matters in litigation must offer that testimony in evidence, is an expert witness also subject to this rule? Can the unwilling expert witness be compelled to provide his or her expert opinions? In some cases, the courts have made no distinction between fact and expert witnesses and have required the latter to appear and testify without compensation other than that paid by the courts to all witnesses. However, other cases have held that persons may not be required to attend court and testify as an expert, or, at least, they may not be required to do so without extra compensation. Those latter decisions are based on the theory that knowledge acquired or an opinion formulated through the exercise of one's faculties as an expert is a form of property and therefore protected by constitutional guarantees against the taking of property without just compensation (5).

Reviewing a case in which a physician was subpoenaed to testify as an unwilling expert, a New Jersey court held in 1934 that "neither justice nor public policy" forbids an expert from refusing to testify as to his opinion (6). More recently, a New York court stated,

> An expert may not be compelled to give his 'opinion' against his will. The distinction lies in the nature of the legal process. The function of a witness is to state what he has seen, heard, or knows about the facts in issue, and he is within the command of a subpoena to do so. He is not within command of a subpoena to give an opinion based upon knowledge acquired through study, thought, reflection or experience (7).

However, in *Summers v State*, a Texas court held that a medical expert who had made a postmortem examination was compelled to disclose the results of that examination. The physician had objected that his knowledge was attained by professional skill, and that he could not be compelled to testify without compensation (8). In *Flores v State*, another Texas case, the appellate court held that the trial court should have instructed the physician director of the criminal investigation laboratory for Dallas to respond to the defense attorney's request for his opinion as to whether the alcohol concentration of a murder victim's blood indicated intoxication (9). The physician stated that he had no opinion because, "I have not been retained as an expert witness for the defense . . . and unless I am retained as an expert witness . . . I am . . . refusing to give testimony for the defense." Although these Texas cases indicate that a treating physician *may* be compelled to give expert testimony without compensation other than payment of minimal witness fees and mileage, such expert testimony usually is compensated.

Who should pay witness fees?

An attorney seeking a physician's testimony usually contacts the physician well in advance to make witness arrangements. The physician should try to reach an agreement then concerning his or her fee and arrangements for payment. Ordinarily, the attorney will agree on a reasonable fee for the physician's time even though the required testimony could be procured by subpoena. This occurs because the prudent attorney respects the value of the physician's time, and attempts to work with the physician witness to avoid needless disruption of his medical practice and personal life.

As noted above, physicians usually testify by deposition rather than in court. Customarily, depositions are taken in the physician's office. It also is customary for the attorney to pay

the physician immediately upon receipt of the physician's bill for his services in giving the deposition. However, the client, rather than the attorney, is legally obligated to pay for such testimony, unless the attorney has agreed to other arrangements. Most courts hold that because

> an agent is not personally liable on a contract, made for his principal where the party with whom he is contracting knows that he is acting for another, and taking the view that an attorney incurring expenses in connection with litigation is ordinarily acting as an agent for the litigant, and that this is usually known to those with whom he deals, . . . the attorney is not personally liable for the charges in question, unless he expressly or impliedly assumes special liability therefor (10)

In *Clark v Maddux*, an Illinois physician sued an attorney to recover his fees for reviewing medical information in connection with a medical malpractice case (11). The physician testified that he had agreed to review the records involved in a medical malpractice claim during a discussion in the attorney's office. However, the physician added, "There was 'no real indication who was going to pay' his fee, but that it was his 'assumption' that the defendant's office would pay 'since she agreed to the fee.'" The attorney testified that she told the physician whom she represented that she never agreed to become personally liable for the testifying physician's services. The attorney also had sent a letter confirming the hourly fee agreed upon, but protesting charges for extensive research and copying services. The court held that the attorney was not personally liable for the physician's fees.

However, in *Nagle v Duncan*, a Texas court noted that although attorneys generally are not liable for expenses incurred in connection with litigation, the defendant attorney was responsible for payment of a court reporter's fees for preparing a transcript (12). The court referred to the attorney's letter to the court reporter. It read, "Enclosed is the firm's check in the amount of $150, as a deposit against the costs of the record to be prepared in the above matter. Please advise me when the record has been completed of the remaining charges." The court concluded that the letter constituted sufficient evidence of the attorney's intent to be personally responsible for the cost of the record to raise an issue of fact. The Nagle court also referred to another opinion from the Texas Supreme Court stating, "Texas law provides that in order for an agent to avoid liability for his signature on a contract, he must disclose his intent to sign as a representative to the other contracting party. Uncommunicated intent will not suffice . . . ."

It appears that Texas courts, unlike other courts, more readily will consider evidence that an attorney has personally obligated himself for services requested on behalf of his or her client. However, to avoid any disputes regarding who will pay for services requested by an attorney, the physician should consider sending a simple letter of agreement regarding payment for expert services (Fig 1). Such a letter may not be necessary for an attorney with whom the physician has dealt successfully in the past. However, even attorneys who always have handled payment of expert fees in a professional and

1. Suggested letter of agreement regarding payment of physicians for expert services.

Dear _____(attorney)_____,

Please consider this letter as an acknowledgement of our agreement that I, as a treating physician for _____(patient)_____, with the consent of _____(patient)_____, as evidenced by a release of medical information executed by _____(patient)_____, will be deposed as an expert witness regarding _____(patient's)_____ diagnosis and prognosis on _____(date)_____ at my office. I will give this deposition in consideration of _____(fee arrangement)_____, the fee that we agreed upon. We also have mutually agreed that payment of this fee will be your personal responsibility and, as such, should be paid within _____(number)_____ weeks of the taking of my deposition. A deposit of _____(amount)_____ is requested. The deposit will be applied to the bill for my service as an expert witness. Further arrangements regarding compensation will be made if it becomes necessary for me to testify at trial.

Please acknowledge this agreement by signing in the space provided below. Please retain a copy of this agreement and send the original back to me prior to my deposition.

Thank you.

Sincerely,

_____

Physician's signature

_____

Attorney's signature

timely manner should not find such an appropriate and businesslike letter of agreement offensive.

What is reasonable compensation?
Computation of an hourly fee may be the most appropriate way to set a charge for testifying as an expert witness. This hourly rate will vary from area to area and depends largely on the expertise of the witness. Physicians and attorneys have reported that the hourly rate ranges from $150 to $300. Physicians should include time spent in preparing reports, attending conferences, doing research, as well as the actual time expended giving testimony. Since most depositions require at least two hours, a physician may wish to request an advance deposit equal to two hours' work with the remaining charges billed later.

Conclusion
The Council on Ethical and Judicial Affairs of the American Medical Association recognizes that providing medical testimony pursuant to a patient's request is an ethical obligation. TMA and the State Bar of Texas have worked to achieve a better understanding between the medical and legal professions concerning physician testimony in litigation. TMA and the State Bar have adopted a Code for Physicians and Attorneys of Texas, which is available from the TMA Office of the General Counsel (13). The code discusses arrangements for court appearances, conferences, medical reports, and other topics that affect interprofessional relations between physicians and attorneys. Adherence to this code by both professions should enable physicians to meet their ethical obligation to testify about their patients' diagnoses and prognoses without undue inconvenience.

HELENE A. ALT, JD
TMA Assistant General Counsel

REFERENCES

1. Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association 1986. Chicago, American Medical Association, 1986, Opinion 9.07.
2. Lehnhard v Moore, 401 SW2d 232 (Tex 1966).
3. Cleveland v State, 508 SW2d 819 (Tex 1974).
4. Tex R Evid 701.
5. Annot, 77 ALR2d 1182 (1961).
6. Stanton v Rushmore, 169 A 721 (NJ 1934).
7. Hessek v Roman Cath Church of Our Lady, Etc, 363 NYS2d 197 (1975).
8. Summers v State, 5 Tex Ct App 365 (1879).
9. Flores v State, 491 SW2d 144 (Tex Crim App 1973).
10. Annot, 15 ALR3rd 531 (1967).
11. Clark v Maddux, 454 NE2d 1179 (Ill App 2 Dist 1983).
12. Nagle v Duncan, 570 SW2d 116 (Tex Civ App—Houston (1st Dist) 1978, writ dism'd woj).
13. Texas Medical Association Committee on Liaison with the State Bar of Texas, State Bar Committee on Coordination with Other Professional Groups: Code for Physicians and Attorneys of Texas. Austin, Texas Medical Association, 1984.

prn, ltd.
locum tenens

the U.S.A.'s "temporary" solution specializing in family practice, radiology, and anesthesiology

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

There are now attractive private practice opportunities for the following specialities in Baytown, Texas.

TEXAS GULF COAST

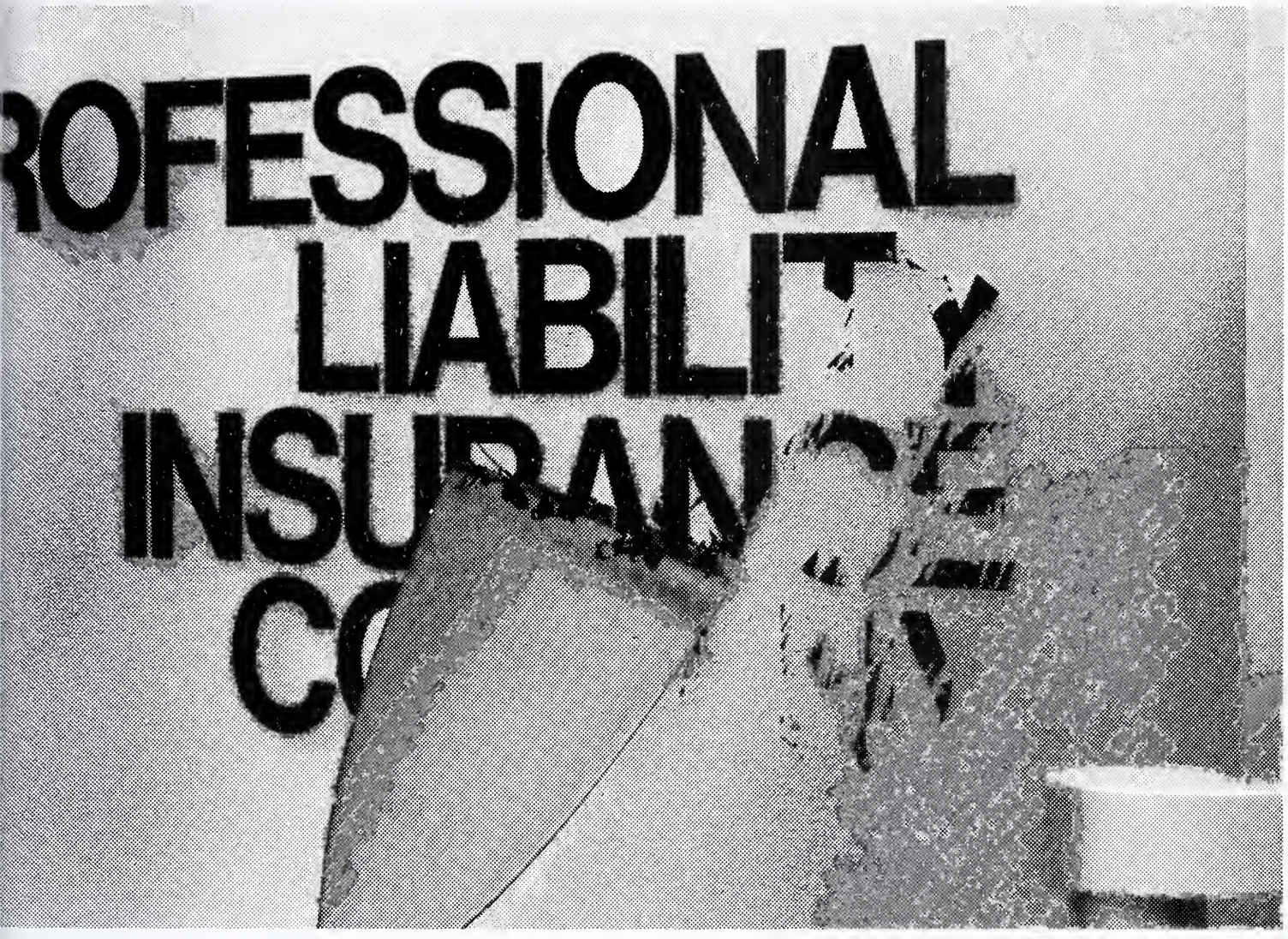
- FAMILY PRACTICE
- OB/GYN
- PEDIATRICS
- UROLOGY
- ORTHOPEDIC SURGERY

An attractive financial and recruitment package will be provided to physicians in a new medical office building next to our 191-bed Humana Hospital-Baytown, located just off one of the community's main thoroughfares. A multi-million dollar expansion program, which includes a new Women's Unit, was completed last October and additional major expansion is currently underway. We also have an active in-house marketing program and physician referral service.

Baytown, pop. 60,000, is located just 20 miles southeast of Houston, the fourth largest metropolitan area in the country. Our community offers relaxed small-town living with easy access to all the amenities of a major metropolitan area. Hunting, fishing and boating are major pastimes as the recreational offerings of the Gulf of Mexico are close by.

For further information on these opportunities and the amenities offered call or write Manager, Professional Relations, Humana Inc., The Humana Building, 500 West Main Street, Louisville, KY 40201-1438, or call TOLL-FREE: 800/626-1590.

Humana
INNOVATION IS OUR BUSINESS



In ten years your malpractice carrier may be just a memory.

Unless it's Medical Protective.

As you consider professional liability insurance, consider this. The coverages stated in the policy are basically a promise — a promise to be here when needed regardless of legal climate or economic conditions. A company's ability to keep this promise is critical because your financial security may depend on it. Unfortunately, too many firms are now finding the task impossible.

Analyze your liability insurance options carefully just as you would any important investment. Go beyond the agent and the policy to the company that stands behind both. How long has it been in operation? Has it weathered some of the tough times? Will it be there for you when you need help?

The Medical Protective Company pioneered professional liability coverage before the turn of the century and has served doctors exclusively ever since. Over 500,000 of them. Through good times and bad. We'll be here when you need us.

Contact The Medical Protective Company through one of our general agents. History shows we keep our promises.

77

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

Wayne L. Kirk, Richard B. Ross
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH

INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Robert S. McFadden, MD
Daniel E. Whitman, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
Eugene M. Hoyt, MD
James V. Ryan, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

You've chosen your profession.

We can secure it.

American Physicians Life Insurance (API Life) has specialized in the insurance needs of Texas physicians for 7 years.

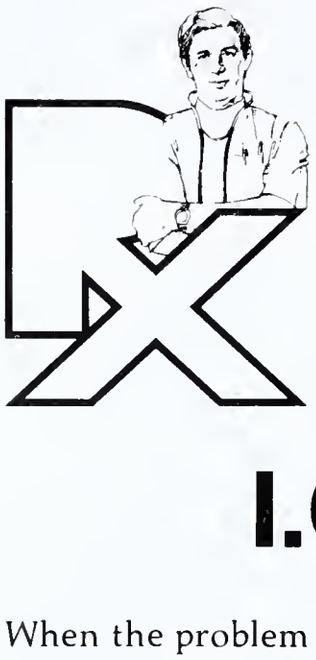
Because our company is owned by doctors, we know that a physician's life and disability coverage needs are different than those of other professionals. All of our products are designed to meet those needs, and we offer them at highly competitive rates.

For answers to your questions about:

- Universal Life and Annual Renewable Term
- Income Replacement and Business Overhead Expense
- Deferred Compensation (Bonus Alternative for the Incorporated Physician)

call **Toll Free at 1-800-252-3628**, or watch your mail for more information arriving in the next few weeks.

American Physicians Life Insurance Company is a subsidiary of American Physicians Insurance Exchange, the doctor-owned liability insurance company entering its 2nd decade of service to Texas physicians.



for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

Patient recall systems

Most physicians are interested in having patients come back for their periodic re-evaluations. An HEW study of private practices indicated that 59% of all patient visits result in a scheduled follow-up. In many cases these are annual re-appointments and in some cases they are semiannual; in chronic cases they are more frequent.

One of the casual ways of dealing with patients regarding annual visits is to suggest that they call or come in on their birthdays. Some people forget—after all, who wants to think about a doctor's appointment in conjunction with a birthday celebration? Another problem is that many people may wish to come in during their birthday month, and that may be when the doctor plans a long vacation. Therefore, the schedule is overloaded with these visits just before and just after the doctor's vacation.

Asking patients to call in 3 months or 6 months for that type of appointment doesn't work well either. Many patients forget. Others are anxious and they call too soon.

Another problem with scheduling far in advance is that the patients may, on short notice, call and reschedule due to some other, more pressing business. When they call to reschedule the appointment, they generally do not want to wait long and may be taking away appointment slots that should be saved for more urgent patient visits.

And suppose the patient comes in, before the appointed date, for another or allied medical problem? His or her need for the previously established appointment time may be eliminated. Therefore, we have the potential of "no-shows" for such patients.

A further disadvantage of making appointments 3, 6 and 12 months in advance is that it locks the doctor in. If you want to take a day or a few days off, you will have to call patients that are scheduled for those dates and reschedule them. This is not only costly, but can result in bad patient relations.

Finally, some practices resort to telephoning patients as a reminder technique. This means that we have to have these names recorded in some sort of log, which is quite expensive to maintain. What if the telephone is no longer in service? Does that mean the patient has moved? Is the phone disconnected? What if the patient doesn't have a phone? What if the patient is not at home from the hours of 9 am to 8 pm?

These systems just don't work too well, and I recommend a better approach. A better approach involves not just one idea, but a few sequential ones which I'll explain in five simple steps.

Step 1—Doctor Communications: You should have a well-designed charge ticket which makes it easy for you to note when you would like this patient to be seen again. This non-verbal communication tool helps your front office staff estimate when that patient should be seen again.

Step 2—Reminder Mailing: The patient does your clerical work by addressing an envelope to himself/herself. The envelope contains a reminder card which is already inserted. The reminder card says: "Please call the office for your examination. The doctor thinks this is important for your continued well being."

Step 3—Coding the Recall Visit: At the top right corner of the envelope, where you will eventually place a postage stamp, you will put a code indicating when the patient is to come back and when the patient was last seen. For example, 6/12 means the patient is to be back in June and was last seen in December; 6/6 means the patient is to be seen in June and was last seen in June; 6/3 means the patient is to be seen in June and was last seen in March. Obviously, the higher priority, for recall purposes, would be given to the patient who's coming in after three months.

All envelopes with a 6 on the numerator are placed in a June storage box, to be mailed in May. (Shoeboxes are very handy for storing these envelopes.) Starting in early May your staff could send out reminder mailings to those patients who have the higher priority, ie, 6/3, 6/4 as compared to 6/6 and 6/9. A postage stamp is placed over the code numbers.

Patient appointment reminder cards are not all sent out in one big batch. Just sending out a few each day will help spread the return calls throughout the month.

Step 4—Patient Data Maintained: Every envelope going out of your office should have the following three-word message below your return address—"ADDRESS CORRECTION REQUESTED." Envelopes having this message instruct the post office to provide you with a new mailing address (for a fee of 25 cents) should the patient have moved. It helps you to have that information. You may wish to send a letter to this patient suggesting that he/she seek a new physician in the new community for health maintenance purposes.

Step 5—Dealing with High-Priority or High-Risk Patients: If seeing a patient is very important and you are concerned about the possibility of mailing out a reminder card and not hearing from the patient, there is something you may wish to do. The simplest thing you could do is to buy colored, self-adhering dots, one-half to one inch in size, that could be affixed to the visible edge of the patient's file folder. A small, green dot could be used for the month of June, for example. When that June patient comes in, the receptionist peels the dot off the chart. At the end of the month of June, we pull any charts that still have small, green dots affixed, and call the patients or send them a second reminder.

The other alternative is to maintain a hand-written monthly log for high priority patients and try to reach them by phone or, if that fails, by sending a mail reminder.

I recommend this five-step approach, and you can tailor any part of it to fit the special needs of your practice.

GEORGE S. CONOMIKES
President, Conomikes Associates, Inc, 4270 Promenade Way, Marina del Rey, CA 90292.

This article has appeared in the *LACMA Physician*, journal of the Los Angeles County Medical Society, and is reprinted with permission.

J.M. Day

John Murray Day, MD, McAllen, died Aug 26, 1986. He was 61.

Born in Toronto, Dr Day was a 1951 graduate of the University of Toronto Medical School. He served a rotating internship at Medieal Centre in Jersey City, NJ, and then was a resident in general surgery at the Medical University of South Carolina and in neurological surgery at the University of Cincinnati. Dr Day practiced in Flint, Mich, for 20 years. In 1978 he moved to Texarkana, Tex, and practiced there until his move to McAllen in 1983.

Dr Day is survived by his wife, Marion Day, McAllen; sons, Robin Day, Flint, Mich, and Timothy Day, Saginaw, Mich; daughters, Sandra Burleson, Aliee, Tex, and Jennifer Luckay and Leslie Ann Day, both of Fort Worth; and sisters, Jean Dougall and Marilyn Kozen, both of Canada.

G.J. Ehni

George John Ehni, MD, a Houston neurosurgeon, died Sept 2, 1986.

Dr Ehni, 72, practiced in Houston from 1949 until the time of his death. During 1959–1979 he was chairman of the division of neurosurgery at Baylor College of Medicine.

A native of Pekin, Ill, Dr Ehni was a 1939 graduate of Northwestern University Medical School in Chicago. He served an internship at Cincinnati (Ohio) General Hospital (July 1939–1940) and a residency at the Mayo Foundation in Rochester, Minn (July 1940–1944). During World War II, Dr Ehni served in the US Navy. In 1946 he moved to Temple and established the department of neurosurgery at Seott and White Clinic. He moved to Houston in 1949.

Dr Ehni was a past president of the Neurosurgical Society of Ameriea, the Southern Neurosurgical Society, and the International Society for Study of the Lumbar Spine.

He is survived by his wife, Velaire Florence Kaplan Ehni, Houston; sons, George John Ehni III, Dallas; and Bruce Loyal Ehni, MD, Capt Brian Paul Ehni, and Scott Michael Ehni, all of Houston; daughters, Margo Lynn Ehni Goodwin, Dallas; and Nicole Marie Ehni and Melanie Sue Ehni Mouzoon, MD, both of Houston; brothers, Glenn Ehni, Pekin, Ill, and Ralph Ehni, Peoria, Ill; and four grandchildren.

P.B. Kamin

Peter B. Kamin, MD, a retired allergist, died Sept 23, 1986, at age 71.

A native of Galveston, Dr Kamin practieed there for ten years. For the past 26 years he was a practicing allergist in San Antonio.

Dr Kamin attended Rice University and The University of Texas Medieal Branch at Galveston, where he earned his medical degree in 1940. During World War II, he served in the US Army Medical Corps with the Army Evacuation Hospitals. He returned to Galveston, where he was a professor of pediatrics at the medical school. After postgraduate training at the Allergy Research Foundation in Washington, DC, Dr Kamin moved to San Antonio, where he specialized in the treatment of allergies.

Survivors include his wife, Rose Kamin, San Antonio; sons, Wayne B. Kamin, Austin, Tex, and Roy B. Kamin, San Jose, Calif; and sisters, Hanna Kaplan, Bert Agranowitz, and Sarah Hoffman, all of Houston.

E.T. Kealey

Edward Thomas Kealey, MD, an honorary member of Texas Medical Association who practiced medicine for 56 years, died Sept 12, 1986. He was 79.

Dr Kealey was born in Edgerton, Wis. He received a bachelor of science degree from Marquette University and a medical degree in 1931 from St Louis (Mo) University School of Medicine. After an internship at Santa Rosa Hospital in San Antonio, Dr Kealey remained in Texas, practicing in Aransas Pass and in Johnson City. A family physician, Dr Kealey moved to Texas City in 1949 and praeticed there until his retirement in 1979.

He is survived by his wife, Alice Kealey, Texas City; sons, Michael Kealey, Modesto, Calif; John Kealey, Richmond, Tex; and James Kealey and Patriek Kealey, both of Texas City; daughters, Ann Francis Chiboris, Dhahran, Saudi Arabia; Susan Elizabeth Albers, St Louis; and Mary Ellen Curry, Waynesboro, Ga; 27 grandchildren; and one great-grandson.

J.A. Lockhart

Jessie A. Lockhart, MD, a retired Houston physician, died Sept 5, 1986. She was 68.

Dr Loekhart was born in Eden, Tex, and was a 1939 graduate of Baylor College of Medicine. She practiced medicine in Houston, specializing in the treatment of pulmonary diseases. Retiring from the practice of medicine in 1982, Dr Lockhart moved to San Antonio. She returned to Houston in 1985.

Survivors include her daughters, Judy Lee Gardiner, Houston; Billie Alice Gardiner, Houston; and Martha Lynn Gardiner Lewis, San Antonio; sons, David Lawrence Gardiner and William Jess Gardiner, both of Houston; sister, Alva Blaine, MD, Corpus Christi, Tex; and five grandchildren.

B.F. Mitchel

Ben F. Mitchel, MD, 60, Dallas, died Sept 16, 1986. Dr Mitchel was chief of thoracic and cardiovascular surgery at Baylor University Medical Center.

A native of Cleveland, Miss, he attended the University of Mississippi and reeeived his doetor of medicine degree from the University of Tennessee in 1947. He completed an internship at Kansas City General Hospital and a residency at Kansas City General Hospital, Baylor University Medieal Center, and Parkland Memorial Hospital. Dr Mitchel served in the Air Force from 1952 to 1954, mainly as chief of surgery of the 3615th USAF Hospital in Selma, Ala. He joined the staff of Baylor University Medical Center in 1957 and was appointed chief of thoracie and cardiovascular surgery in 1977. He also served as a director of the Baylor University Medical Center Foundation and as clinical advisor of thoracic and cardiovascular surgery at UT Southwestern Medical Sehool.

Surviving family members inelude his mother, Elizabeth Mitchel, Cleveland, Miss; wife, Sara Smith Mitchel, Dallas; daughters, Elizabeth Mitchel and Sally Mitchel, both of Dallas, and Jean Allsopp, Shirley, Mass; sons, Ben F. Mitchel, III, and Michael Mitehel, both of Dallas; and two grandehildren.

R.O. Moers
Robert O. Moers, MD, 68, died Sept 1, 1986. Dr Moers was a family physician in Houston for 39 years.

A native of Groveton, Tex, he was a 1940 graduate of The University of Texas at Austin and a 1946 graduate of The University of Texas Medical Branch at Galveston. Dr Moers moved to Houston in 1946 for an internship at Hermann Hospital.

Surviving family members include his wife, Natalie Moers, Houston; sons, Robert E. Moers and Richard C. Moers, both of Houston, and William K. Moers, Dallas; and two grandchildren.

W.E. Moore, Jr
Wallace E. Moore, Jr, MD, a San Antonio physician specializing in allergy and immunology, died Sept 16, 1986. He was 44.

Dr Moore was born in Fresno, Calif. After attending The University of Texas at Austin, he graduated from Southwestern Medical School in Dallas in 1967. After an internship at Children's Medical Center in Dallas, Dr Moore completed a residency in pediatric allergies at the National Jewish Hospital in Allergic Diseases in Denver. He had practiced in San Antonio for the past 16 years.

Dr Moore was president-elect of the Allergy Section of the Texas Medical Association.

He is survived by his wife, Janice Schilo Moore; sons, Christopher Harber Moore and Michael Schilo Moore; and sister, Margaret Elsie Rote, all of San Antonio.

R.W. Pipkin
Robert Worth Pipkin, MD, 82, Dallas, died Sept 6, 1986. A former resident of Baytown, Tex, Dr Pipkin was director of the Baytown medical department of Exxon for 39 years, retiring in 1972.

He was born in Bristol, Tex. He received a bachelor of arts degree from Baylor University in 1925 and a medical degree from Baylor College of Medicine in 1929. After completing an internship at Hermann Hospital in Houston, Dr Pipkin began working for Exxon in Baytown. During his career, he served as an associate professor of public health and industrial medicine at Baylor College of Medicine.

Survivors include his wife, Irene Bobs Pipkin, Dallas; daughter, Bobby Jean Campbell; grandson, Robert W. List; and granddaughters, Leslie Worth List and Lisabeth Ann List, all of Dallas; sisters, Hortense Staton, Lancaster, Tex, and Mary Sue Preston, Oakridge, Tenn.

R.L. Price
Robert L. Price, MD, a longtime Sweetwater physician, died Sept 17, 1986. He was 74.

A native of Graham, Tex, Dr Price lived in Sweetwater 40 years. He was a 1941 graduate of Baylor College of Medicine. His internship and residency were at Hermann Hospital in Houston. After serving in the US Army Medical Corps in the South Pacific for three years, Dr Price began a general practice of medicine in Sweetwater.

He was a past president of the West Texas Medical Association.

Survivors include his wife, Maxine McBride Price, Sweetwater; son, Buddy Price, Austin, Tex; daughter, Nancy Watson, Dallas; brother, Bud Price, Tyler, Tex; and two grandchildren.

C.C. Smith
Carroll C. Smith, MD, 75, Waco, died Sept 11, 1986. Dr Smith was a past president of the McLennan County Medical Society and the Texas Club of Internists.

He was born in Ben Hur, Tex. He was a 1933 graduate of Baylor University in Waco and a 1937 graduate of The University of Texas Medical Branch at Galveston. After a residency at Kansas City (Mo) General Hospital, Dr Smith joined his father's medical practice in Mart, Tex, in 1938. During World War II, he served in the Army Air Corps as a flight surgeon. After the war, he entered a residency program at Oklahoma University Hospital, and in 1948 he began a private practice of internal medicine in Waco. Along with Brian Aynesworth, MD, and William Roddy, MD, Dr Smith opened the Waco Diagnostic Clinic in 1960 and practiced there until July 1986.

Surviving family members include his wife, Mary Townsend Smith, Waco; sons, Townsend Smith, Mart, and Mark Smith, Denton; sisters, Lyda Teal and Carmen Baxter, and brother, Charles Smith, all of Waco; and three grandchildren.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

J. M. DAY
McAllen, 1925–1986

G. J. EHNI
Houston, 1914–1986

P. B. KAMIN
San Antonio, 1915–1986

E. T. KEALEY
Texas City, 1907–1986

J. A. LOCKHART
Houston, 1918–1986

B. F. MITCHEL
Dallas, 1926–1986

R. O. MOERS
Houston, 1918–1986

W. E. MOORE, JR
San Antonio, 1942–1986

R. W. PIPKIN
Dallas, 1904–1986

R. L. PRICE
Sweetwater, 1912–1986

C. C. SMITH
Waco, 1911–1986

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audiovisual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student	$ 5.00	☐ Patron	$ 100.00
☐ Sustaining	$15.00	☐ Life	$1,000.00
☐ Subscribing	$25.00		

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

A defense against cancer can be cooked up in your kitchen.

There is evidence that diet and cancer are related. Follow these modifications in your daily diet to reduce chances of getting cancer.

1. Eat more high-fiber foods such as fruits and vegetables and whole-grain cereals.
2. Include dark green and deep yellow fruits and vegetables rich in vitamins A and C.
3. Include cabbage, broccoli, brussels sprouts, kohlrabi and cauliflower.
4. Be moderate in consumption of salt-cured, smoked and nitrite-cured foods.
5. Cut down on total fat intake from animal sources and fats and oils.
6. Avoid obesity.
7. Be moderate in consumption of alcoholic beverages.

No one faces cancer alone.

AMERICAN CANCER SOCIETY®

Starlite Village Hospital

Center Point, Texas

Ph. 634-2212
634-2213

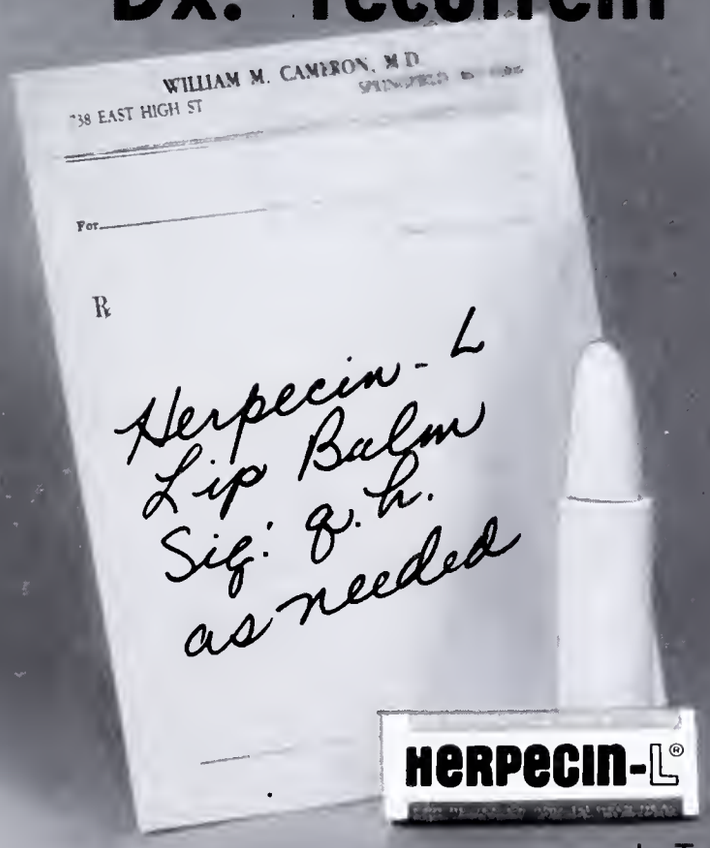
- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Annabelle Lindner
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1986 the library will add more than 600 book titles to its 57,800-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,045 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Aicardi J: *Epilepsy in Children.* New York, Raven Press, 1986.

Baker TJ, Gordon HL: *Surgical Rejuvenation of the Face.* St Louis, The C.V. Mosby Company, 1986.

Barrett J, Nyhus LM: *Treatment of Shock. Principles and Practice.* Philadelphia, Lea & Febiger, 1986.

Bowerman RA: *Atlas of Normal Fetal Ultrasonographic Anatomy.* Chicago, Year Book Medical Publishers, Inc, 1986.

Brashear HR Jr, Raney RB Sr: *Handbook of Orthopaedic Surgery,* ed 10. St Louis, The C.V. Mosby Company, 1986.

Cohen D, Eisdorfer C: *The Loss of Self. A Family Resource for the Care of Alzheimer's Disease and Related Disorders.* New York, W.W. Norton & Company, 1986.

Diamond S, Dalessio DJ (eds): *The Practicing Physician's Approach to Headache,* ed 4. Baltimore, Williams & Wilkins, 1986.

Fisher AA: *Contact Dermatitis,* ed 3. Philadelphia, Lea & Febiger, 1986.

Gould JA III, Davies GJ (eds): *Orthpaedic and Sports Physical Therapy,* (vol 2). St Louis, The C.V. Mosby Company, 1985.

Jackson SM: *Radiation Oncology. A Handbook for Residents and the Allied Health Professions.* St Louis, Warren H. Green, Inc, 1985.

Kadir S: *Diagnostic Angiography.* Philadelphia, W.B. Saunders Company, 1986.

Kanski JJ: *Retinal Detachment. A Colour Manual of Diagnosis and Treatment.* Boston, Butterworths, 1986.

Kirby RR, Taylor RW: *Respiratory Failure.* Chicago, Year Book Medical Publishers, Inc, 1986.

Kjeldsberg CR, Knight JA: *Body Fluids. Laboratory Examination of Amniotic, Cerebrospinal, Seminal, Serous & Synovial Fluids: A Textbook Atlas,* ed 2. Chicago, American Society of Clinical Pathologists Press, 1986.

Kleinknecht RA: *The Anxious Self. Diagnosis and Treatment of Fears and Phobias.* New York, Human Sciences Press, Inc, 1986.

Knapp RC, Berkowitz RS (eds): *Gynecologic Oncology.* New York, Macmillan Publishing Company, 1986.

Lamb D: *Death, Brain Death and Ethics.* New York, State University of New York Press, 1985.

Lazarus JH: *Endocrine and Metabolic Effects of Lithium.* New York, Plenum Medical Book Company, 1986.

Lovell WW, Winter RB (eds): *Pediatric Orthopaedics,* ed 2 (vols 1 and 2). Philadelphia, J.B. Lippincott Company, 1986.

Lowe NJ: *Practical Psoriasis Therapy.* Chicago, Year Book Medical Publishers, Inc, 1986.

Nissenson AR, Fine RN (eds): *Dialysis Therapy.* Philadelphia, Hanley & Belfus, Inc, 1986.

Revell PA: *Pathology of Bone.* New York, Springer-Verlag, 1986.

Rubio PA: *Atlas of Stapling Techniques.* Rockville, Md, Aspen Publishers, Inc, 1986.

Rudolph R (ed): *Problems in Aesthetic Surgery. Biological Causes and Clinical Solutions.* St Louis, The C.V. Mosby Company, 1986.

Stancer HC, Garfinkel PE, Rakoff VM (eds): *Guidelines for the Use of Psychotropic Drugs. A Clinical Handbook.* New York, SP Medical & Scientific Books, 1984.

Streeter NS: *High-Risk Neonatal Care.* Rockville, Md, Aspen Publications, Inc, 1986.

Texas Medical Association 120th Annual Session May 13–17, 1987 Houston

›uston— Great Place To Be May '87

hful, luxurious and probably habit ıing—Houston—site of the 120th ual Session offers excitement, hospi-y, charm. When Texas Medical Asso-on and Auxiliary members convene 13–17 they will enjoy the city's fa-s Southern hospitality, cosmopolitan ıistication and cultural evolution.

ıpercity—vast, varied, vital—Hous-awes the world with its boundless rgy, vibrant commerce, and its emer-ce into unchartered fields such as ce, science, oceanography, medical :arch.

e time to view the cityscapes—ural and manmade; visit the sports nas—Astrodome and Summit; shop Olympian malls. Experience the cul-: and the arts. Enjoy fine dining with innacle view or regional fare in a e-away. Marvel at the renowned as Medical Center, one of the three jor complexes in the nation. Consist-of 29 colleges, schools, institutes l hospitals, the Center attracts stu-ıts, scientists, patients from around world.

›nvention Facilities— ɛyond Your ɛpectations

: annual meeting will be held in wntown Houston. The area has much ›ffer. The architecture will stun you—:iting, bold, futuristic. The superstruc-es stand as proud symbols of prog-s which has catapulted the city into nation's fourth largest city.

: giant imposing structures—actually es within cities—provide efficiency, ɔlity, beauty to resident and visitor. : Albert Thomas Convention and Ex-ıit Center, part of the Houston Civic nter and the focal point for all meet-ıs and exhibits for the TMA Session, ers superb exhibit space and meeting accommodations. The surrounding hotels where members and guests will be housed are outstanding. The Hyatt Regency, a contemporary architectural wonder, features a 30-floor open atrium and park-like lobby. Doubletree Hotel, elegantly French, offers deluxe rooms and suites overlooking Sam Houston Park. The hotel is connected to the downtown tunnel system which leads to major businesses, shops and restaurants. Auxiliary headquarters, Four Seasons Hotel, is eloquently contemporary—rich woods, handwoven oriental tapestries. A relaxed and comfortable atmosphere. The Whitehall Hotel has elegant public rooms filled with fine antiques. Holiday Inn—Downtown Houston, one of the world's largest, is convenient to other hotels and the Convention Center.

Scientific Sessions, House of Delegates and Exhibits—Albert Thomas Convention and Exhibit Center

Business Sessions (Boards, Councils, Committees, Delegates' Housing)—Hyatt Regency Houston

Auxiliary Headquarters—Four Seasons Hotel

General Housing/Meetings—Doubletree Hotel at Allen Center

General Housing/Meetings—The Whitehall

General Housing—Holiday Inn Houston—Downtown

Features

Exhibits—Scientific, Technical

Section Programs—Some 500 scientific presentations in Allergy, Asthma, and Clinical Immunology—Colon and Rectal Surgery—Digestive Diseases—Diseases of the Chest—Endocrinology—Family Practice—Internal Medicine—Neurological Surgery—Neurology—Nuclear Medicine—Obstetrics and Gynecology—Occupational Medicine—Oncology—Ophthalmology—Otolaryngology—Pathology—Pediatrics—Physical Medicine and Rehabilitation—Plastic, Reconstructive, and Maxillofacial Surgery—Psychiatry—Public Health—Radiology—Surgery—Urology.

Specialty Society Programs—In addition to numerous topics of general interest, you will have an opportunity for an update on your own particular specialty.

Sunrise Sessions—Informal presentations by guest speakers on topics of interest to all specialists. Have coffee with one of the professors from 8:15 to 9:15 am on Thursday, Friday and Saturday and join the discussions.

Sports/Alumni Events—Golf and Tennis Tournaments; Fun Run; Alumni Parties; Class Reunions.

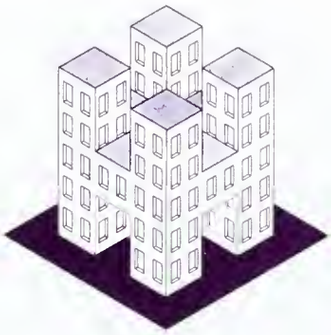
Auxiliary Program

The theme for the 1987 convention of the TMA Auxiliary will be "From This Moment On" in keeping with the progressive theme for the 1986–1987 year.

The convention will open with a gala champagne welcome reception honoring county presidents Wednesday, May 13. All business sessions will be held Thursday morning, May 14, including recognition of 1986–1987 award winners. The Thursday luncheon speaker will be Ninfa, Houston's highly successful entrepreneur and owner of the chain of Ninfa's Restaurants.

The 1987–1988 board will meet Friday, May 15, and the installation of officers will take place during the luncheon which will feature an outstanding speaker.

A wide array of special optional events has been planned for auxiliary members



during the 1987 convention. Among them will be a tour of River Oaks homes, a financial planning seminar by Dean Kanaly, a demonstration of the Four Seasons' "light cuisine" by the hotel's chef and a series of "Dine-Around" dinners offered for Thursday evening.

For additional information, contact TMA Auxiliary, 1801 North Lamar Blvd., Austin 78701, 512/477-6704.

Registration

There is no registration fee for members of the Texas Medical Association, for speakers and exhibitors in the annual session program, and for nonmembers such as officially-invited guests of the Association.

Registration fees are charged for some nonmember categories, and these are mentioned in the nonmember categories listed below:

Nonmember Registration Fees

a. Physicians	**$100**
b. Allied Health Disciplines—Nurses, Technicians, Medical Assistants	**$10**
c. In-Training—Interns, Residents, Fellows	**$10**
d. Students	**$10**
e. Prospective Exhibitors and Approved Visitors	**$50**
f. Spouses of Nonmember Physicians	**$10**

One Location for Registration for Session

(See hours indicated):

Albert Thomas Convention and Exhibit Center
East Hall, Smith Street Entrance

Wednesday, May 13, 9 am–5:30 pm
Thursday, May 14, 7 am–5:30 pm
Friday, May 15, 7 am–5:30 pm
Saturday, May 16, 7 am–3:30 pm

You may register in advance of the session by completing the Advance Registration Form printed here. Pick up badge and registration materials during above hours.

Guest Speakers

H. Whitney Boggs, Jr., MD
Shreveport, La
colon and rectal surgery

Robert Coles, MD
Cambridge, Mass
child psychiatry

John S. Collis, MD
Cleveland, Ohio
neuralogical surgery

Reginald R. Cooper, MD
Iawa City, Iawa
orthopaedic surgery

John J. Coury, Jr., MD
Port Huron, Mich
surgery;
President, American Medical Association

Dale Daniel, MD
San Diego, Calif
orthapaedic surgery

Scott F. Davies, MD
Minneapolis, Minn
internal medicine (pulmonary diseases)

Charles A. Fager, MD
Burlington, Mass
neurological surgery

David N. F. Fairbanks, MD
Washington, DC
atolaryngolagy

Robert G. Feldman, MD
Baston, Mass
neurolagy and pharmacology

Ian B. Fries, MD
Brick, NJ
orthapaedic surgery;
President, Natianal Flying Physicians Assaciatian

Rudolph P. Galask, MD
Iowa City, Iowa
obstetrics and gynecology

M. Eric Gershwin, MD
Davis, Calif
rheumatolagy/allergy/immunology

Jerome C. Goldstein, MD
Washington, DC
otolaryngology

Stanley A. Herring, MD
Kirkland, Wash
physical medicine and rehabilitatian

Joseph Jankovic, MD
Hauston, Tex
neuralogy

Ralph E. Kauffman, MD
Detroit, Mich
pediatrics and pharmacology

David W. Kennedy, MD
Baltimore, Md
atolaryngology

Ira J. Kodner, MD
St. Louis, Mo
colon and rectal surgery

Steven M. Larson, MD
Bethesda, Md
nuclear medicine

Pia Mellody, RN
Wickenburg, Ariz
alcoholism and chemical dependency counseling

Dean D. Metcalfe, MD
Bethesda, Md
allergy and immunology

Stephen H. Miller, MD
Portland, Ore
plastic and reconstructive surgery

Byron A. Myhre, MD, PhD
Torrance, Calif
pathology

Richard M. Narkewicz, MD
South Burlington, Vt
pediatrics

Harold S. Nelson, MD
Denver, Calo
allergy and immunalagy

Eric Pfeiffer, MD
Tampa, Fla
geriatric psychiatry

Peter Randall, MD
Philadelphia, Pa
plastic surgery

Robert C. Reeder, MD
Memphis, Tenn
plastic and recanstructive surgery

Ensor Rodriguez-Lopez, MD, PhD
Las Angeles, Calif
occupational medicine

J. James Rowsey, MD
Oklahama City, Okla
ophthalmalogy

Julio V. Santiago, MD
St. Lauis, Mo
pediatrics; endacrinalagy and metabalism

Herbert H. Schaumburg, MD
Branx, NY
neurolagy

Rhea Seddon, MD
Houston, Tex
astranaut, aerospace medicine and emergency medicir

Edward A. Sickles, MD
San Francisco, Calif
radiology

J. Graham Smith, Jr., MD
Augusta, Ga
dermatology

Volker K. H. Sonntag, MD
Phoenix, Ariz
neurological surgery

Theodore H. Stanley, MD
Salt Lake City, Utah
anesthesialogy

Theodore I. Steinman, MD
Boston, Mass
nephralogy

Lenore C. Terr, MD
San Francisca, Calif
psychiatry

David H. Thornberry
Austin, Tex
Member, State Board of Insurance

Henry J. L. Van Dyk, MD
New Orleans, La
ophthalmalogy and neurology

Joseph Westermeyer, MD, PhD
Minneapolis, Minn
psychiatry

e Four Freshmen—
tal Entertainment

abulous Four Freshmen—singers,
:ians, entertainers—will dazzle
; Medical Association and Auxiliary
bers with their versatility Friday
ng, May 15, during the 1987 An-
Session. Featured attraction for the
ciation/Auxiliary party, America's
ber One Vocal and Instrumental
tet will give a stirring performance
y in the beautiful Imperial Ball-
, Hyatt Regency Hotel. The Bo-
les Band, a popular Houston dance
stra, and Gary Bun Richardson,
dian, will provide a "don't miss"
ng. The party begins at 8 pm and
r at 1 am. There will be light hors
uvres and a cash bar for cocktails.
proceeds will be donated to the
iary Student Loan Fund.

Roy Rogers and Bojongles

The Four Freshmen

The "instrumental" quality which identifies the Freshmen Sound was brought to focus by their inventive concept of using their voices as musical instruments. Combined with their knowledge of harmony, the effect of a modern orchestral ensemble is created. Highly versatile, the Frosh trade around and play with professional skill seven instruments. Their albums, The Four Freshmen and Five Trombones, The Four Freshmen and Five Saxes, etc. are collector's items.

Fresh, different, appealing, the group is as popular in the 1980s as when they began singing as college freshmen in the 1950s and were "discovered" by Stan Kenton. "Day by Day," "Graduation Day," "How Can I Tell Her," and "It's a Blue World" will stir some good memories. Bob Flanigan, the leader and original member of the group, enthralls audiences with his outstanding trombone playing and wry humor. Saxophonist Audie Goodman sings second part and came to fame with the legendary Modernaires band. Mike Beisner sings third and plays a mean trumpet, while Rod Henley sings fourth vocal part and plays a variety of instruments including keyboards, trumpet and trombone.

Get a group together and plan a memorable evening with the Four Freshmen. The fun begins at 8 pm, Friday, May 15. Tickets are $25 per person and should be ordered in advance of the Session by completing the form here.

neral Meeting
ncheon Speakers
amine the Future

President of the American Medical
ciation, John J. Coury, Jr., MD, will
ore "Challenges of American Medi-
" in his Friday, May 15, General
ting Luncheon address in the Albert
nas Convention Center. Dr. Coury, a
eral and pediatric surgeon from Port
on, has spent his tenure as President
ing with colleagues over the nation
arding the future of medicine and the
vidual physician. He has served in
erous capacities with American
dical Association and Michigan State
dical Society. He is currently Chair-
of the Council of the World Medical
ciation.

Friday agenda also includes the in-
lation of B. David Vanderpool, Jr.,
, Dallas, as President of Texas Medi-
Association for 1987–1988.

Dr. Rhea Seddon

Physician-Astronaut, Rhea Seddon, MD, will share her experience in space and provide information on NASA's future activities Saturday, May 16, at the General Meeting Luncheon. Dr. Seddon made her first trip beyond earth's boundaries as Mission Specialist in April 1985. She was responsible for deployment of the Leasat Satellite, Remote Manipulator System operations and the American Flight Echocardiograph Experiment.

Dr. Seddon received her MD degree from the University of Tennessee College of Medicine in 1973. Between the period of her internship and residency, she served as an emergency room physician in Mississippi and Tennessee hospitals, and now serves in this capacity in the Houston area in her spare time. Dr. Seddon also has done research into the effects of radiation therapy on nutrition in cancer patients. Married to Astronaut Robert L. Gibson, they have a four-year-old son.

Both luncheons are scheduled in Room 201, Albert Thomas Convention Center, 12:15–2 pm. Purchase tickets ($20 per person) in advance by completing the form here.

1987 Annual Session Advance Registration Form (please print)

name

address

city state zip

specialty

Members, please check all applicable spaces below:

- ☐ Physician
- ☐ Intern/Resident/Fellow
- ☐ Medical Student
- ☐ TMA Officer
- ☐ TMA Trustee
- ☐ TMA Delegate
- ☐ TMA Alternate Delegate
- ☐ TMA Councilor
- ☐ TMA Vice Councilor
- ☐ TMA Council/Committee
- ☐ **AMA Member**
- ☐ AMA Delegate
- ☐ AMA Alternate Delegate
- ☐ CMS President
- ☐ 50 Year Club
- ☐ Hospital Medical Staff Section Representative
- ☐ TEXPAC
- ☐ TEXPAC 300 Club
- ☐ MSS Executive Council
- ☐ MSS Chapter Officer
- ☐ MSS Chairman
- ☐ RPS Chairman
- ☐ RPS Councilor
- ☐ RPS Executive Council
- ☐ Speaker
- ☐ Scientific Exhibitor
- ☐ **Satisfying state level meeting requirement**

Nonmember	Fee
☐ **Speakers, Exhibitors**	waived
☐ **TMA and County Medical Society Staff and Family**	waived
☐ **Physicians**	$100
☐ **Interns, Residents, Fellows**	$10
☐ **Medical Students**	$10
☐ **Allied Health Personnel**	$10
☐ **Prospective Exhibitors, Approved Visitors**	$50
Nonmember's Family	
☐ Family of Nonmembers	$10
☐ Children (21 and under)	waived

Please mail check and registration card to: Texas Medical Association Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Advance Ticket Reservation Form

name

address

city state zip

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Complete the advance ticket reservation order form, return it to TMA with your check. Pick up tickets at the registration area. Note ticket sales location and hours.

Number of Tickets	Function and Price inclusive of tax and gratuity	Amount
_____	**The Four Freshmen** **BoJangles Band** **Comedian Gary Bun Richardson** Friday, May 15, 8 pm–1 am $25 per person	_____
_____	**General Meeting Luncheon** **John J. Coury, Jr., MD** Friday, May 15, 12:15–2 pm $20 per person	_____
_____	**General Meeting Luncheon** **Astronaut Rhea Seddon, MD** Saturday, May 16, 12:15–2 pm $20 per person	_____
	TOTAL	$_____

Advance registration cards and ticket money must be received by ***April 7. No refunds after April 29.***

Please complete and return before April 7 to: Texas Medical Association, Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Final Program Order Form

The Program and Abstracts of the 120th Texas Medical Association Annual Session will be available in early April. If you wish to order your copy in advance, please return this form with a check for $5.00 to Texas Medical Association, Business Office, 1801 North Lamar Blvd., Austin, Texas 78701.

Please send a copy of the Program and Abstracts for the 120th Annual Session to:

name

address

city state zip

My check for $5.00 is enclosed.

ke Your ervations Now

quests will be processed first-ne, first-served by the Housing Bu-u, Greater Houston Convention & tors Council through its comput-ed system.

nplete ***in full*** the ***Official Housing quest Form*** and return it imme-tely to:

as Medical Association Housing eau
0 Main
uston, Texas 77002-9396

not send housing form to Texas dical Association. This will only ay your request.

ly reservations received on the ***ficial Housing Request Form*** will accepted. Hotels will not accept ervations directly, and telephone uests cannot be accepted.

three hotels in order of ference.

adline for reservations is ril 29.

rmations

om confirmation will be sent to you ***ectly*** from the hotel within three eks of receipt of your request by Housing Bureau. Please check it efully to be sure all information is rect.

Deposits

not send any room deposit with using Form. Should a deposit be quired, the hotel will request it.

servations will be held until 6 pm he arrival date unless a later ar-al time is indicated. If a deposit is quired to hold your room past m, you will be notified at the time confirmation by hotel. The deposit uld be mailed directly to the hotel.

ges and Cancellations

y changes in room reservations, ival or departure dates should be t in writing directly to the hotel.

cancellations should be sent to Housing Bureau immediately so t others can be accommodated. ur notice of cancellation must be eived within 48 hours of your eduled arrival or your deposit not be refunded. ***DON'T BE A O SHOW!***

uttle service will be provided be-een hotels and Convention Center.

Participating hotels and codes:

Deadlines for Reservations—April 29

1. **Four Seasons Hotel* (FSDT)**
   1300 Lamar Street
   (Auxiliary Headquarters; General Housing)

   Singles $75
   Doubles $85

2. **Holiday Inn Houston—Downtown (HID)**
   801 Calhoun Street
   (General Housing)

   Singles/Doubles $58

3. **Doubletree Hotel* (DBH)**
   at Allen Center
   400 Dallas Street
   (Housing for Program Participants)

   Singles/Doubles $75

4. **Hyatt Regency Houston* (HR)**
   1200 Louisiana Street
   (Delegates' Housing; Board, Council, Committee Meetings)

   Singles $83
   Doubles $85

5. **The Whitehall (WHIT)**
   1700 Smith Street
   (General Housing)

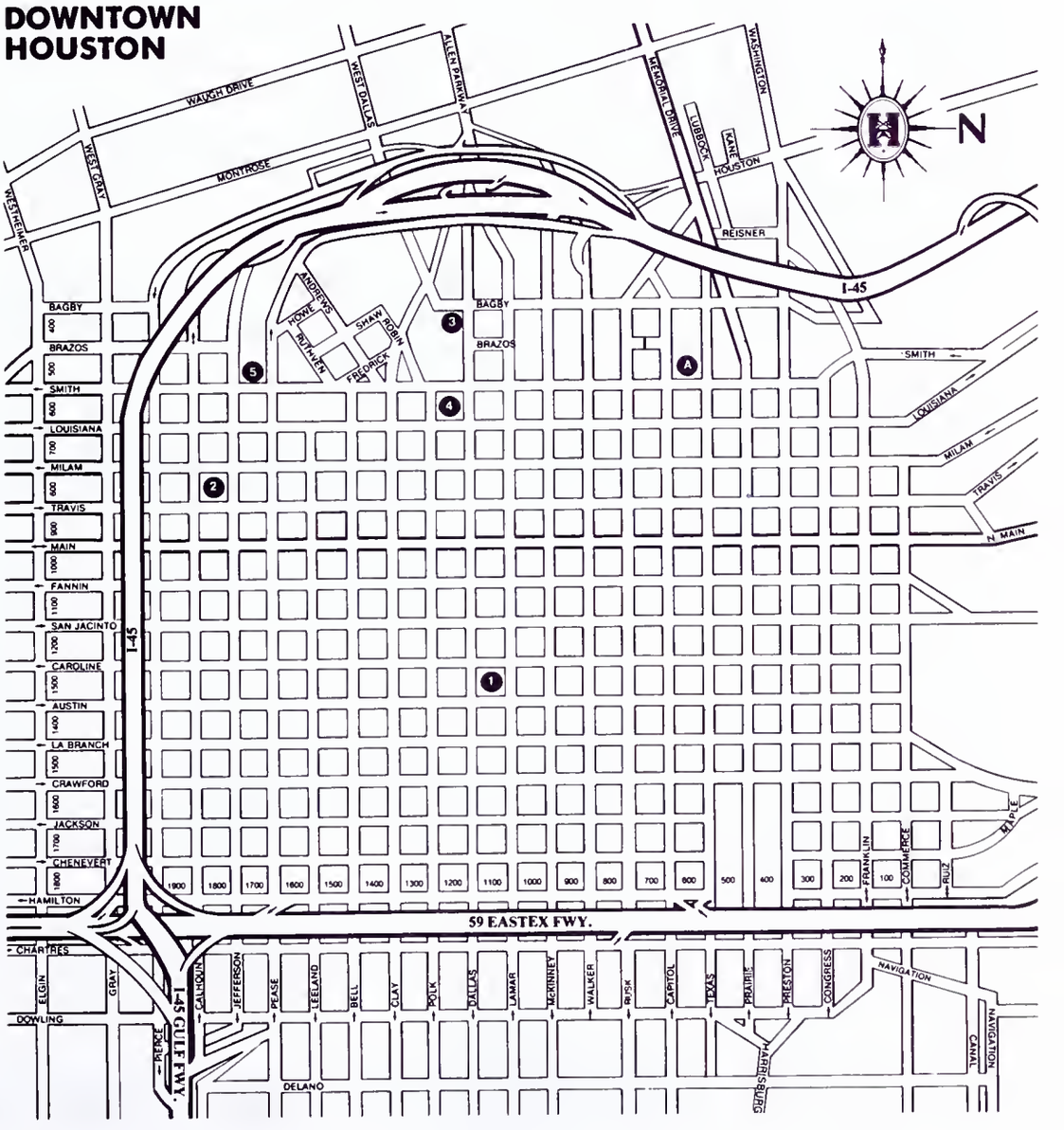
   Singles/Doubles $65

A **Albert Thomas Convention and Exhibit Center**
612 Smith Street
(Scientific Sessions, House of Delegates Meetings, Exhibits)

The above room rates do not include 11% occupancy tax and daily parking fees.

*Headquarters Hotels

DOWNTOWN HOUSTON



FOR HOUSING BUREAU USE ONLY

Texas Medical Association
120th Annual Session
May 13–17, 1987
Houston

MAIL TO:

TEXAS MEDICAL ASSN.
HOUSING BUREAU
3300 MAIN
HOUSTON, TX 77002-9396

OFFICIAL HOUSING REQUEST FORM

• PLEASE READ CAREFULLY •

_ PLEASE **PRINT** OR **TYPE** ALL ITEMS TO ASSURE ACCURACY.
_ COMPLETE EACH PART BELOW IN DETAIL FOR CORRECT AND RAPID COMPUTER PROCESSING.
_ SHOULD MORE THAN **TWO (2)** ROOMS BE NEEDED, FORM MAY BE DUPLICATED, OR SUPPLEMENTAL ROOM LIST **MUST** BE ATTACHED USING SAME FORMAT AS IN PART III.
_ **ALL** CONFIRMATIONS WILL BE SENT TO INDIVIDUAL INDICATED IN PART I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

NAME OF PERSON REQUESTING ROOMS

(FIRST NAME) (LAST)

(NAME OF CLINIC, GROUP, OR COMPANY)

(STREET ADDRESS OR P.O. BOX NUMBER)

(CITY) (STATE) (ZIP)

(COUNTRY) (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: Select **THREE** Hotel/Motels of your choice. No request will be processed without **THREE** choices.

FIRST CHOICE (HOTEL CODE) SECOND CHOICE (HOTEL CODE) THIRD CHOICE (HOTEL CODE)

PART III

INSTRUCTIONS:
1. **PRINT** OR **TYPE** NAMES OF **ALL** PERSONS OCCUPYING EACH ROOM.
2. SELECT TYPE ROOM DESIRED WITH ARRIVAL AND DEPARTURE DATES.
3. SUPPLEMENTAL LIST FOR ADDITIONAL ROOM **MUST** USE SAME FORMAT.
4. PRINT OR TYPE LAST NAME FIRST.

	OCCUPANTS NAME/S (PRINT LAST NAME FIRST)	P + 1—Parlor & one bedroom	P + 2—Parlor & two bedrooms
ROOM NO. 1	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.
ROOM NO. 2	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.

FOR USE OF ASSN. ONLY

NOTE: PLEASE RECHECK ALL ITEMS FOR CORRECT INFORMATION

A Referral Center for Cardiopulmonary Diseases

Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address: P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

AIM HIGH

A SPECIAL PRACTICE FOR SPECIALISTS.

If you're a **Surgeon or OB/GYN or Other Medical Specialist**, the Air Force may have a special practice for you. What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special! Find out just how special your practice can be. Call

Dallas, TX (817) 640-6469
San Antonio, TX (512) 341-6802
Houston, TX (713) 784-3132

AIR FORCE

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
DIRECTOR-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY

James A. Knight, MD
PSYCHIATRY

R. John Prevost, MS
AIR POLLUTION

Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES

John A. Thomas, PhD
BIOMETRICS

Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES

Hester Beth Bland, HSD
HEALTH EDUCATION

George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

A. J. LANIER, JR, MD
Diplomate American Board of Anesthesiology
Cervical, thoracic, and lumbar epidural steroid injection, cervical sympathetic, celiac plexus, and lumbar sympathetic blocks, differential spinal and neurolytic nerve blocks.
8350 Meadow Road, #250, Dallas, Texas 75231; 214 691-6885

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7558

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
Colon and Rectal Surgery Colonoscopy
Laser Hemorrhoidectomy

Barnett Tower, Baylor Medical Plaza, 3600 Gaston Avenue, Suite 411, Dallas, Texas 75246; 214 821-4300, 350-2441
122 W. Colorado, Dallas, Texas 75208; 214 942-8734

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP
Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD
Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO
James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS
David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building 8,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY
For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY
Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA
Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism
Practice Limited to Endocrinology & Diabetes
5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service
. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD
Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE
David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery
General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS
Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD
Diplomate American Board of Orthopaedic Surgery
DAVID J. ZEHR, MD—Microsurgery
ARNOLD V. DiBELLA, MD
Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA
Diplomates American Board of Orthopaedic Surgery
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS
Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops
. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery
JACINTO ZAMBRANO, MD
Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone 817 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3800 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 8116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
W. Robert Hudgins, MD
Richard H. Jackson, MD
Mark J. Cwikla, MD
Casey E. Patterson, MD (Retired)

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620, Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905; Dallas, Texas 75231; 214 369-7596

1302 Lane St., Copper Tree Medical Center, Suite 300, Irving, Texas 75062; 214 259-4768

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American Board of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

TMA HealthWise Series
. . . Another service of your association

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Computerized Tomography

John T. O'Neal, MD, Neurosurgery
Robert D. Schneider, MD, Neurology and Electroencephalography
Steven K. Crouse, MD, Neurology and Electroencephalography

Murchison Medical Bldg., Suite 307
1810 Murchison Drive, El Paso, Texas 79902
Telephone 915 532-8901

ARLINGTON ASSOCIATION OF
NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 77054
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

ONCOLOGY

HEMATOLOGY-ONCOLOGY ASSOCIATES OF
HOUSTON, PA
Gary B. Fleishman, MD
Joel W. Abramowitz, MD, PhD
Diplomates of the American Boards of Internal Medicine & Medical Oncology
Diplomate of the American Board of Hematology (JWA)
909 Frostwood, Suite 120, Houston, TX 77024; 713 467-1630
6565 DeMoss, Suite 211, Houston, TX 77074; 713 270-1188

TMA Action monthly newsletter
. . . Another service of your association

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES

Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or 800 872-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 821-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 75204
214 521-1153; 1-800-442-5376

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 78205; 512 226-5191

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-800-833-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

TMA Physician Membership Directory

. . . Another service of your association

PEDIATRIC OPHTHALMOLOGY OF HOUSTON

Monte I. Stavis, MD

Pediatric ophthalmology and adult strabismus

7500 Beechnut, Suite 130, Houston, Texas 77074
713 270-4500

OPHTHALMOLOGY ASSOCIATES

JOE L. BUSSEY, MD—Cataract and Lens Implant Surgery
RUFUS A. ROBERTS, MD—Diseases and Surgery of the Retina
Cataract and Lens Implant Surgery
THOMAS H. SMITH, MD—Ophthalmic Plastic and Reconstructive Surgery
DAN E. BRUHL, MD—Cataract and Lens Implant Surgery
JOHN W. ZERDECKI, MD—Cataract and Lens Implant Surgery
Refractive Surgery
DORIS E. JENSEN, MD—Medical Ophthalmology
DAVID HENDRICKS, MD—Medical and Surgical Ophthalmology
JAMES A. SAVAGE, MD—Glaucoma Consultation and Surgery

308 S. Henderson, Fort Worth, Texas 76104
1-800-6-SIGHT, 817 355-5435, appointments 817 335-6070
se habla espanol

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS

Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas
77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas
77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

BRAZOSPORT EYE INSTITUTE

Frank J. Grady, MD, PhD, FACS

Surgical Correction of Nearsightedness and Astigmatism

103 Parking Way, Lake Jackson, Texas 77566; 1-800-392-0091

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Shubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

TMA Physicians Benevolent Fund

. . . Another service of your association

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American 8oard of Orthopedic Surgery

1701 Pine 5treet, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DD5, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. 8endel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American 8oard of Orthopaedic 5urgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. 8rodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, 5uite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA

ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FAC5
Ronald J. 8lumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American 8oard of Otolaryngology
1733 Curie, 5uite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

TMA 1986/1987 Calendar of Events

Winter Conference, Austin, February 6

Annual Session, Houston, May 13-17

Fall Conference, Austin, September 26

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES

Dorothy Patras, MD

Anatomic Pathology and Consultation in Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. 8ox 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.

J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. 8ox 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup 5ervice in Houston

AUSTIN PATHOLOGY ASSOCIATES MEDICAL PARKWAY CLINICAL LABORATORY

Anatomic and Clinical Pathology, Electron Microscopy, Cytology and Dermatopathology

Computerized Results Reporting With Telecommunications Available

A. Q. Da Silva, MD
Donald A. Parsons, MD
William J. Reitmeyer, MD
Paul A. LeBourgeois, MD
Phillip C. Collins, MD
David R. Ralph, MD

RENAL PATHOLOGY: Gerald A. Beathard, MD

Main Lab: 711 W. 38th Street—Suite C-11, Austin, Texas 78705
Mailing Address: P.O. 8ox 9806, Austin, Texas 78766-0806
Telephone: 512 452-2529

Specimens: Mail to Main Lab
Office Pickup Service in Austin Area

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. 8ox 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. 8rowne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FAC5
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin 5t., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FAC5
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD
David A. Lee, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

Representing TMA's legislative views
. . . Another service of your association

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Larry E. Reaves, MD
Diplomate American 8oard of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza 8uilding
800 Eighth Avenue, Fort Worth, Texas 76104
817 33S-47S2 817 332-9441 817 33S-47SS

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American 8oard of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. 8ox 2476, Fort Worth, Texas 76113; 817 336-0446

WILLIAM E. BARNES, MD

Diplomate American 8oard of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas; S12 4S4-76S9

JOHN E. CARTER, MD, PA

Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office S12 696-2390; Medical Exchange S12 227-6331

PLASTIC SURGERY ASSOCIATION

Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite S, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD

Diplomate American 8oard of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

82S Medical Drive, Tyler, Texas 7S70S; 214 S93-8296

JAMES L. MOORE, MD, FACS, PA

Diplomate American 8oard of Plastic Surgery

Plastic and Reconstructive Surgery

1200 8inz, Suite 730
Houston, Texas 77004; 713 S26-6161

PLASTIC SURGERY CLINIC OF AUSTIN

Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery
Jacinto Zambrano, MD
Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery
30th & Red River, Austin, Texas 7870S
24 HR# S12 479-680S & S12 474-HAND

The 8urn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES

302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone S12 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 7S6-0111

ROGER D. HARMAN, MD

Diplomate American 8oard of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 33S-4044

COSMETIC AND RECONSTRUCTIVE PLASTIC SURGERY SPECIALISTS PA

Neal R. Reisman, MD, FACS
Mark D. Gilliland, MD
Diplomate American 8oard Surgery
Diplomate American 8oard Plastic Surgery
American Society Plastic and Reconstructive Surgery
American Society Surgery of the Hand
7S1S S. Main, Suite S00, Houston 77030; 713 79S-S3S3
12121 Richmond, Suite 211, Houston 77082; 713 SS8-S3S3
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-S3S3

PSYCHIATRY

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, A8PN: Psychiatry
Diplomate, A8PN: Child-Adolescent

Presbyterian Professional 8uilding II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1SS0 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
8yron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen 8. Erdman, MD
Don C. Payne, MD
Mark J. 8lotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. 8rownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell 8lvd., Dallas, Texas 75228
214 381-7181

TMA Postgraduate Courses
. . . Another service of your association

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite 8411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

TMA Memorial Library

. . . Another service of your association

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS

Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

REGIONAL CARDIOVASCULAR CENTER

Cardiac, Vascular and Thoracic Surgery

Mario O. Kapusta, MD
Phillip R. Adams, MD

925 E. Dawson, Tyler, Texas 75701
214 593-9022

UROLOGY

ELGIN W. WARE, JR, MD
GEORGE E. HURT, JR, MD
L. MICHAEL GOLDSTEIN, MD
STEVE M. FROST, MD

Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS

Diplomate, American Board of Urology

Adult and Pediatric Urology

Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES

Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology

221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

There are no bruises.
And no broken bones.
She seems the picture of the perfect child.
But if you look closely you can see how rejection, fear and constant humiliation have left scars that have tragically affected her childhood.

So now only a shattered spirit remains.
And the light of laughter has gone out.
Remember that words hit as hard as a fist. So watch what you say.
You don't have to lift a hand to hurt your child.

Take time out. Don't take it out on your kid.

Write: National Committee for Prevention of Child Abuse, Box 2866E, Chicago, Illinois 60690

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Internist, BC/BE—San Antonio State Chest Hospital needs internist for hospital-based practice. Broad spectrum of cases, special emphasis on pulmonary diseases. Spanish speaking preferred, not essential. Regular hours. Liberal State benefits including retirement. Paid malpractice. Equal opportunity employer. Apply SASCH, P.O. Box 23340, San Antonio, TX 78223; S12 S34-8857, ext. 208.

Wanted—Dallas metro area physicians who have a Texas license to help with pre-enlistment physicals. Full-time pays $36,889 to $45,367 with Government benefits. Part-time pays daily rate of $12S for morning work. 214 767-5211 or S212.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1S33 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $6S,000 to $10S,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 7S204, or call toll free 1-800-S27-214S.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-2S3-1795.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3SS5 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Expanding 21 physician multispecialty group has two openings: Pediatrician and Active Family Practitioner. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 W 11th Place, Big Spring, Texas 79720.

Family Physician—Young, board certified family physicians seek associate for fee-for-service group practice in central Texas community of 5,600. Excellent schools, organized sports, strong industry. Reasonable access to Austin, Bryan/College Station. Competitive incentive package. Send CV in confidence to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Attention Gen/FP (including those with semi-retirement thoughts). Practice opportunity available on beautiful Lake Whitney located in Central Texas. Office space (new) and personnel furnished for up to one year. This offer is well suited for any level of practice so desired. Immediate area affords excellent deer, duck, dove and quail hunting. Good fishing and water recreation at front door. Reply in confidence to P.O. Box 458, Whitney, Texas 76692.

Family Practice. Two areas of Texas seeking board certified family practitioners: Major metropolitan city of 225,000 and nearby community of 20,000. Community supported hospitals will provide free office space, income guarantee, practice-building support and other benefits. Contact Maureen Bragg, Summit Health Ltd., 1800 Avenue of the Stars, Los Angeles, CA 90067; 213 201-4000.

Family practitioner is seeking an associate for a busy and growing practice in Lubbock. Opportunity to step into established patient population and expand with your own practice. Contact Maureen Bragg, Physician Recruitment, Summit Health Ltd., 1800 Avenue of the Stars, Los Angeles, CA 90067; 213 201-4000.

Exceptional Opportunity
In The Texas Medical Center
60K–75K+

Mature, competent, United States or British trained, family practitioner/general surgeon who does family practice needed for established, private clinic. Must be experienced in minor office surgical procedures, Sigmoidoscopy, Colonoscopy-25cm. Diagnostic, and Cryosurgery.

Permanent position, excellent compensation package with complete benefits.

Send resumes to Director of Professional Services, Box 706, One Longfellow Lane, Houston, Texas 77005.

General Surgery

Immediate opening in general surgery to join well established group serving several Central Texas counties. We have a fully equipped hospital with excellent facilities and personnel. The practice will require expertise in a wide range of general surgery. We offer competitive guaranteed salary and paid professional liability. Send CV and references to: Dr. Steve B. Alley, 401 5th Street, Valley Mills, Texas 76689 or call 817 932-S203 for further information.

Wanted: General surgeon, BE/BC for developing regional medical center, Panhandle region of Texas. All benefits paid. Excellent opportunity for growth and long-term success. Contact: J. Stuert, ATSI Medical Group, S12 255-7967.

Internal Medicine

General internist wanted to join busy North Dallas-Richardson practice. Associate retiring. Excellent opportunity for a well qualified internist with a desire for long term commitment. If you would like to become a respected member of this community, send your CV to George M. Markus, MD, 2175 Promenade Center, Richardson, Texas 75080; telephone 214 23S-2304.

Internal Medicine—Texas. Community of 7,500 people in Northeast Texas seeks an internal medicine specialist. Board certification or board eligible MD is required for this position. This is a solo practice with a complete financial package provided by a hospital. Interested applicants should write, including complete CV, to: Administrator, P.O. Box 549, Carthage, Texas 7S633.

Obstetrics Gynecology

Position available for BC/BE OBG to join multispecialty group. Starting income guaranteed and excellent benefit package including malpractice, disability, health and dental insurance. Send cover letter and CV to Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 7820S.

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 4S minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 32S-0741.

Orthopedic Surgery

Wanted: Orthopedic Surgeon. Position available with 12-doctor multispecialty group located in the Medical City Dallas complex in North Dallas. All benefits paid for by the group, afternoon off, rotating call schedule. Send curriculum vitae to Charles E. Allbritton, Administrator, 7777 Forest Lane, Suite 240, Dallas, Texas 7S230; telephone 214 661-7700.

Pediatrics

Expanding 21 physician multispecialty group has two openings: Pediatrician and Active Family Practitioner. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1S01 W. 11th Place, Big Spring, Texas 79720.

Pediatrician—Opportunity to join multispecialty clinic group in West Texas community of 10,000. Close to metropolitan area, major university and medical school. Guaranteed income first year. No investment required. Relocation expenses paid and other incentives. Well equipped progressive hospital with call sharing opportunities and night ER coverage supplied. Contact Carl R. Smith, MD, 806 637-2SS8 or 806 637-4227 (home), Brownfield, Texas 79316.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Board certified or eligible, immediate opening for full term or locum tenens private practice position in Dallas-Fort Worth metroplex to aggressive professional. There are in-patient and out-patient services. Must be knowledgeable in ultrasound, special procedures and CT. Please reply to Ad-637, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Other Opportunities

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an out-patient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; S12 476-7129. Toll free in Texas 1-800-331-8472.

The Medical and Surgical Clinic of Sherman, Texas is currently expanding its multispecialty group to include specialists in pediatrics, ophthalmology and otolaryngology. Interested parties please contact Ron Marshall, Administrator, 214 893-5138 (collect).

Positions Available—Seeking BC/BE, OBG, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call S12 477-6704, ext. 263. No charge to TMA members!

Arizona based physician recruitment firm has opportunities coast to coast. "Professionals working

with professionals." Over 14 years experience. Call 602 990-8080, or send CV to: Mitchell & Associates, Inc., P.O. 8ox 1804, Scottsdale, Arizona 8S2S2.

Physician Opportunities—Sunbelt. We have unadvertised solo, group and hospital based opportunities for general practice and most specialties. Financial guarantees, benefit packages negotiable. Fee paid. Professionals serving professionals. Send CV or call Fred 8rinker, S12 327-6944. Sanford Rose Associates, 1705 Capital of Texas Hwy. S, Suite 202, Austin, Texas 78746.

Proctologist needed for West Texas town serving a referral area of 250,000 people. Only proctologist has just retired. Economy stabilized by three universities and a large military installation. Many recreational and cultural activities available. Not far from metropolitan areas. Respond to: Professional Building of Abilene, Inc., 1818 Pine, Abilene, Texas 79601.

Pulmonary internist—BC/BE to join internal medicine group, South Texas. Excellent practice environment and compensation package. Send CV to: Valley Diagnostic Clinic, 2200 Haine Drive, Harlingen, Texas 78550, Attention: Amanda Fuhro, Personnel Director, S12 421-S199.

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for 8C or 8E physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. 8ox 2000, Edinburg, Texas 78539; S12 383-1481.

ATSI Inc., an established nationwide multi-specialty medical recruiting firm in Austin, Texas is seeking Board certified and Board eligible physicians in the following specialties. First year guarantees of 75K to 120K. Many Texas opportunities.

Gastroenterology
General Surgery
Family Practice
OB/GYN
General Internal Medicine
Internal Medicine Specialties
Orthopedic Surgery
Pediatrics

Nationwide placements, for consideration send CV in strict confidence to Armando L. Frezza, Recruitment Manager, ATSI Inc., PO Box 1387, Round Rock, Texas 78680, or call 512/255-6031.

Texas Opportunities—$90,000-$140,000 guarantees. Small towns, large towns, cities. Solo, groups, partnerships. FPs, O8Gs, PDs, GSs, IMs, Ps. Contact Ray Carter or Nancy McEntire at 512 338-0041 or send CV to Kemper Resources, 9442 Capital of Texas Highway North, Suite 3S0, Austin, Texas 787S9.

BC/BE pathologist with special interest in surgery and/or pathology to join established practice in Texas. Send CV to Ad-647, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

Psychiatrist/Associate Clinical Director—Paris, Texas. Mental Health Management, Inc., (MHM) is the nation's leading provider of professional services for hospital mental health programs. We have an immediate opportunity available for a psychiatrist to serve as an ACD at St. Joseph's Hospital. This is a 20-bed inpatient psychiatric unit that exclusively serves a large catchment area in northern Texas. The opportunity offers a generous compensation package. Please contact Gary M. Smith at 800-368-3S89, or send CV to: Physician Recruiter, Dept. PTX, Mental Health Management, Inc., 1500 Planning Research Drive, Suite 2S0, McLean, Virginia 22102. EOE. Mental Health Management, Inc.

Immediate opening for family practitioner or internist to join group of primary care physicians in Waco. Superb medical community in a pleasant city with multiple educational and recreational activities. Currently operating two primary care clinics. Option emergency department coverage available to further supplement income if desired. Part-time application also considered. R. L. Kaspar, MD, 1700 Providence, Waco, Texas 76707; 817 753-4SS1, ext. 7950.

OPPORTUNITIES SOUGHT

We have physicians who are looking to join solo, partnerships, or multispecialty groups in the Texas area. For more information call Medical Advisory Group, Inc., 214 758-9939.

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar 8lvd., Austin, Texas 78701. S12 477-6704, ext. 263.

Board certified OBG wishes to relocate to larger community. Prefer to associate with another individual or group, but will consider solo. U.S. medical graduate. U.S. specialty trained. 8ilingual English/Spanish. Good practice experience. Please reply to Ad-632, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

General Surgeon, Board Certified—Experienced in trauma and other disciplines including hyperalimentation. Excellent track record since 197S. University trained. Like to be busy doing at least 10-15 cases a week. Practice limited to surgery. Licensed in Texas, Ohio, Michigan. Please reply to Ad-64S, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

Board certified internist seeks position in D/FW area. Selling successful practice in Utah in order to reunite family in Texas. Five years traditional private practice experience. Training, Universities of Iowa and Oregon. Please reply to Ad-644, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

PRN, Ltd. Locum Tenens is your "temporary" solution. We are actively seeking staff and clients in the fields of family practice, radiology, and anesthesiology. 1-800-531-1122. 1000 North Walnut, Suite A, New 8raunfels, Texas 78130.

Seeking position in fee-for-service independent emergency medicine group engaged in low-high trauma emergency department. 8oard certified internist, finishing last year of emergency medicine residency. Licensed in Texas, 1982 graduate of The University of Texas Medical School at Houston. Send inquiries to: Patrick T. Conner, MD, 6400 Northwest Expressway, #932, Oklahoma City, Oklahoma 73132.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical laboratory, office, x-ray, ultra-sound equipment in excellent condition. We buy, sell, broker and repair. Ask about our Holter Scanning Services. Appraisals by Certified Surgical Consultants, Medical Equipment Resale, Inc., 24026 Haggerty Road, Farmington, Michigan 48018; 313 S69-4407 anytime.

Complete set-ups to single items. Save over S0% on some items. Some examples: Ritter power tables, Medco Sololator, 8urdick EK-8, Nova I, x-ray equipment, new Procto equipment. Ames Seralyzers, $500 up. All guaranteed! We buy, sell and broker. Call or write Medexchange, P.O. 8ox 18164, Dallas, Texas 7S218, 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $127S. Cardionostic Holter recorder (cassette) available from $99S. Smallest slightest Holters update. Fast service (24-48 hrs.) turn over. Hookup kits starting at $4.95. Special introductory offer of three free tests with any purchase or lease of the recorder. Cardiologist overread available for $15. If interested call 301 870-3626.

Office Space/Property

San Antonio—General internist desires to sublease ready-to-go office space with five exam rooms. Rapidly growing North Central location. Ideal for allergist, dermatologist, or other primary care physician. For information call 512 377-3224.

Austin: For lease, 1300 sq. ft. duplex near Seton. Ideal for solo. Waiting, two offices, lab, nurse's station and four exam rooms. 8en H. White, MD or Karen Haslund, MD, 512 454-8691.

Austin—For lease, 714 sq. ft., Seton Hospital area. Ideal for solo or starting MD. One consultation, two exam rooms, nurse's station, share waiting room. 8rian D. Lowery, MD, S12 4S3-6651.

North Dallas suburb—up to 3400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 867-6500.

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

Austin: To sublet, 2,129 sq. ft. adjacent to Seton Hospital and other primary medical facilities. Ideal for two man office. Waiting, business and reception area, two offices, three exam rooms, x-ray room/lab. Corner suite on 7th floor, with lovely view. Ten-station, 4 lines phone system available also. For more information call Debbie: 512 458-3257.

Houston, Northwest. Finished space. Waiting, reception, 1S examining, endoscopy, fluoroscopy, business, records, staff, pharmacy, two nursing stations. 8uilding new 1984. Excellent for family practice and/or multispecialty. Half way between two area hospitals. Walk-in clinic in building sees 30-60 patients/day, 7 days a week, assuring rapid growth. Flexible terms. J. A. 8urnett, MD; 713 440-7107.

Need general practitioner willing to set up practice in resort area at Canyon Lake, Texas. Traffic flow of 750,000. Designated by AMA as area in need of physician. Have office space available in new professional building in 1987. An established pharmacy will move in by physician. For information call 512 93S-4341 or 512 93S-2821.

Practices

Houston, family practice opportunity—3S year established FP for sale, including all medical equipment in excellent condition. Gross well into six figures. Central location with access of all parts of the city. Several industrial accounts. Further information 713 S22-9249.

Gynecology: Houston. Extremely large, gynecology-only practice for sale in Northwest Houston. Practice enjoys an exceptional net income. Doctor retiring. Option to purchase building. 4½ days per week practice. For further details phone 713 771-S011. TMH428.

Family Practice—General Surgery—Central Texas. Dynamic practice with 100+ patients per week and five to 10 new patients per day. Good location with low overhead. Two hospitals, major university, cultural and recreational opportunities. Call evenings: 409 693-4S29.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $S0,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-690S. Serving MDs for over ten years.

Marketing Services for Physicians

We specialize in assisting physicians in marketing their practices—expanding business through new products and services, materials, referral sources, advertising, publicity and sales programs.

Barbara Salvo & Company
122026 Beverly Drive
Houston, Texas 77065
713/469-0440

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-92S1. (Formerly Home of the Holy Infancy)

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Please indicate six key words for indexing.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within four months of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

What Every Physician's Spouse Should Know

A series of booklets on topics of special interest to medical families published by the American Medical Association Auxiliary

What Every Physician's Spouse Should Know
SURVIVAL TIPS FOR RESIDENT PHYSICIAN/ MEDICAL STUDENT SPOUSES
What Every Physician's Spouse Should Know
IMPAIRMENT
What Every Physician's Spouse Should Know
PROFESSIONAL LIABILITY
What Every Physician's Spouse Should Know
RETIREMENT AND ESTATE PLANNING
What Every Physician's Spouse Should Know
MARRIAGE

Professional Liability
■ Scope of problem ■ Legal process ■ Coping

Impairment
■ Causes ■ Impact on family ■ Getting help

Survival Tips for Resident Physician/ Medical Student Spouses
■ Marriage in the training years ■ Stress ■ Finances

Marriage
■ Who players are ■ Special concerns ■ Stages of medical career

Retirement and Estate Planning
■ Making retirement years fulfilling ■ Providing for the family's future

MAIL ORDER FORM TO:
American Medical Association Auxiliary, Inc.
535 N. Dearborn St., Chicago, IL 60610

Please send me the following publications in the series on ***What Every Physician's Spouse Should Know:***

# of copies
___Impairment
___Professional Liability
___Survival Tips for Resident Physician/ Medical Student Spouses
___Marriage
___Retirement and Estate Planning
(AVAILABLE FEB. 1, 1987)

Each booklet is $3 per copy for AMA Auxiliary members and $5 per copy for non-members.

Enclosed is my check in the amount of $_____ made payable to the AMA Auxiliary. Check must accompany order form.

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

TELEPHONE ( ) _____

Advertising Directory

Air Force	**93**
American College of Physicians	**58**
American Medical Association	**31**
American Physicians Life Insurance	**79**
American Physicians Insurance	**3rd Cover**
Army Medicine	**73**
Campbell Laboratories, Inc.	**85**
Crosslands Medical Complex	**44, 45**
Dallas Rehabilitation Institute	**2nd Cover**
Diagnostic Clinic of Houston	**78**
Humana, Inc.	**76**
I.C. System, Inc.	**80**
Knoll Pharmaceutical	**17, 18**
Eli Lilly & Company	**36**
Marion Laboratories	**69, 70**
McNeil Pharmaceutical	**11**
The Medical Protective Company	**77**
PRN, Ltd.	**76**
Reynolds + Reynolds	**25**
Roche Laboratories	**1, 2**
Scott and White Clinic	**Back Cover**
Spring Shadows Glen	**2nd Cover**
Starlite Village Hospital	**85**
Texas Medical Association	
120th Annual Session	**87–92**
Forecast '87—Winter Conference	**4, 5**
Memorial Library	**84**
Texas Medical Association Insurance Program	**15**
Texas Medical Liability Trust	**67**
Timberlawn Psychiatric Hospital	**Back Cover**
Touro Infirmary	**31**
Trans-Texas Leasing	**68**
The University of Texas Health Center at Tyler	**93**
The Upjohn Company	**35**
Vestra-Subco, Inc.	**73**

Texas Physicians' Directory	**94–101**
Classified Advertising	**102–103**

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

COURSES

FEBRUARY

Anesthesiology

Feb 5-7, 1987
2ND SAN ANTONIO INTERNATIONAL SYMPOSIUM ON NEUROANESTHESIA. Four Seasons Hotel, San Antonio, Tex. Fee $390. Category 1, AMA Physician's Recognition Award; 14 hours. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Feb 27-28, 1987
REFRESHER COURSE IN ANESTHESIOLOGY. Lubbock Memorial Civic Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 743-2929

Cardiovascular Disease

Feb 5-7, 1987
DIAGNOSIS AND TREATMENT OF END STAGE HEART DISEASE: HEART TRANSPLANTATION AND ASSIST DEVICES, 1987. Westin Galleria Hotel, Houston. Fee $275 physicians, $175 residents, students, allied health professionals. Category 1, AMA Physician's Recognition Award; 16.5 hours. Contact Debby Butler, Office of Medical Director 3-276, Texas Heart Institute, PO Box 20269, Houston, TX 77225 (713) 791-2157

Feb 7, 1987
VENTRICULAR TACHYARRHYTHMIA UPDATE. Loews Anatole Hotel, Dallas. Fee $75. Category 1, AMA Physician's Recognition Award; 5 hours. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

General Medicine

Feb 7-14, 1987
MEDICINE OF DIVING. Bonaire, Netherlands Antilles. Fee $450. Category 1, AMA Physician's Recognition Award; 25 hours. Contact Helen Turcotte, Medical Seminars, Inc, 11107 Wurzbach Rd, One Elm Place, Suite 204, San Antonio, TX 78230 (512) 690-1005

Feb 25, 1987
FOOD AND SUBSTANCE EFFECTS ON BRAIN AND BEHAVIOR: SCIENTIFIC, MEDICAL AND PRACTICAL FOUNDATIONS. Hilton Hotel, San Antonio, Tex. Fee $50 symposium, $90 conference, $40 per day. Credit TBA. Contact John Wacker, Association for Children and Adults With Learning Disabilities, 10848 Strait Lane, Dallas, TX 75229 (214) 368-0150

Feb 26-March 1, 1987
5TH ANNUAL INTERNATIONAL SYMPOSIUM ON MAN AND HIS ENVIRONMENT IN HEALTH AND DISEASE. Westin Hotel, Dallas. Fee $275 physicians; $235 RN, LVN, MT, MLT, Allergy Nurse Assistants; $50 residents, students, interns, fellows. Credit TBA. Contact Celia Poole 8345 Walnut Hill Lane, Suite 205, Dallas, TX 75231 (214) 368-4132

Feb 28-March 1, 1987
8TH ANNUAL GERIATRIC MEDICINE CONFERENCE. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Hematology/Oncology

Feb 27-March 1, 1987
3RD ANNUAL CURRENT CONCEPTS IN MANAGEMENT OF CANCER. Sheraton Beach Resort, South Padre Island, Tex. Fee $120. Category 1, AMA Physician's Recognition Award; 10 hours. Contact Martha Berlin, Learning Center J-34, Office of Continuing Education, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Internal Medicine

Feb 20-21, 1987
NEW DEVELOPMENTS IN DIAGNOSIS AND PHARMACOTHERAPY OF INFECTIONS, HYPERTENSION AND RHEUMATIC DISEASES. Four Seasons Hotel, Austin, Tex. Fee TBA. Credit TBA; 11.25 hours. Contact American College of Physicians, Registration Services, 4200 Pine St, Philadelphia, PA 19104 (1-800) 523-1546

Neurology

Feb 13-14, 1987
NEUROLOGY: AN UPDATE FOR THE PRIMARY CARE PHYSICIAN. Houstonian Hotel, Houston. Fee TBA. Credit TBA. Contact Alice Reardon, The University of Texas Medical School, 6431 Fannin, MSB G.004, Houston, TX 77030 (713) 792-5346

Neurosurgery

Feb 25-27, 1987
3RD ANNUAL NEUROTRAUMA CONFERENCE. Westin Galleria Hotel, Houston. Fee $295 physicians, $200 nonphysicians. Credit TBA. Contact Alice Reardon, Office of Continuing Education, The University of Texas Medical School, 6431 Fannin St, MSB G.004, Houston, TX 77030 (713) 792-5346

Orthopedic Surgery

Feb 5-8, 1987
TEXAS ORTHOPEDIC PATHOLOGY WORKSHOP. Conference Room D1.200, The University of Texas Health Science Center, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 25 hours. Contact June Bovill, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Otolaryngology

Feb 21, 1987
SLEEP APNEA. Marriott Hotel-Medical Center, Houston. Fee TBA. Credit TBA. Contact Carol Soroka or Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Pathology

Feb 12-15, 1987
5TH ANNUAL CYTOPATHOLOGY REVIEW COURSE. Lincoln Hotel-Post Oak, Houston. Fee $425 physicians, $300 residents and cytopathologists. Category 1, AMA Physician's Recognition Award; 31

hours. Contact Vicki Forgac or Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Plastic Surgery

Feb 13-14, 1987
BASIC RHINOPLASTY. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $300 physicians, $200 residents. Category 1, AMA Physician's Recognition Award; 15 hours. Contact Ann Parchem, Division of Continuing Education, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Psychiatry

Feb 4-6, 1987
11TH ANNUAL CONFERENCE ON ALCOHOLISM AND DRUG ABUSE, SPECIAL TOPICS. Holiday Inn Civic Center, El Paso, Tex. Fee $140 physicians, $90 nonphysicians. Category 1, AMA Physician's Recognition Award; 19 hours. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 743-2929

MARCH

Allergy

March 4-8, 1987
1987 PAN AMERICAN ALLERGY SOCIETY ANNUAL TRAINING COURSE AND SEMINAR. Four Seasons Hotel, San Antonio, Tex. Fee $415 members course and seminar, $485 nonmembers course and seminar. Credit TBA; 31 hours. Contact Betty Kahler, Pan American Allergy Society, 229 Parking Way, Lake Jackson, TX 77566 (409) 297-8964

March 13-15, 1987
SOUTHWEST ALLERGY FORUM. Westin Paso del Norte Hotel, El Paso, Tex. Fee $150. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Edward Egbert, MD, 1700 Curie Dr, El Paso, TX 79902 (915) 533-3621

Anesthesiology

March 20-22, 1987
RISKY SITUATIONS IN ANESTHESIA: MANAGEMENT AND MONITORING. Westin Hotel at the Galleria, Dallas. Fee $375 physicians, $275 nurse anesthetists. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Barbara Grayson, 3500 Gaston Ave, Dallas, TX 75235 (214) 820-2317

Cardiovascular Disease

March 26-28, 1987
CARDIOLOGY: CLINICAL EVALUATION AND DECISION MAKING. Westin Hotel at the Galleria, Houston. Fee $275 physicians, $150 residents, students, allied health professionals. Credit TBA; 17 hours. Contact Texas Heart Institute, Office of Medical Director, PO Box 20269, Houston, TX 77225 (713) 791-2157

Family Medicine

March 19-22, 1987
12TH ANNUAL FAMILY PRACTICE REVIEW. Marriott on the Riverwalk, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Obstetrics and Gynecology

March 1-7, 1987
UPDATE 87: OFFICE OBSTETRICS AND GYNECOLOGY. Shadow Ridge Resort and Conference Center, Park City, Utah. Fee TBA. Credit TBA. Contact Charlene Lee, Communications Specialist, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4073

March 5-8, 1987
TACO III: 3RD TEXAS ANESTHESIA CONFERENCE FOR OBSTETRICS. Intercontinental Hotel, Houston. Fee $260 physicians, $160 CRNAs. Credit TBA, 14 hours. Contact Pat Joynton, 6431 Fannin, MSB G.004, Houston, TX 77030 (713) 792-5346

March 27-28, 1987
CURRENT CONCEPTS IN OBSTETRICS AND GYNECOLOGY. Inn on the Park, Houston. Fee TBA. Credit TBA; 16 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

March 28, 1987
CURRENT CLINICAL PRACTICE IN OBSTETRICS AND GYNECOLOGY. Registry Hotel, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 6.5 hours. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Ophthalmology

March 20-22, 1987
CLINICAL ADVANCES IN OPHTHALMOLOGY FOR THE PRACTICING OPHTHALMOLOGIST. Houstonian Hotel, Houston. Fee $250 physicians; $125 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Vicki Forgac or Carol Soroka, Office of Continuing Medical Education, Room 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-4941

Pathology

March 6, 1987
DRUG TESTING: MEDICAL, LEGAL, ANALYTICAL ASPECTS. Location TBA, Houston. Fee TBA. Credit TBA. Contact Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

March 9-13, 1987
CURRENT CONCEPTS IN TOXICOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; 35 hours. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

March 2-12, 1987
21ST COMPREHENSIVE REVIEW COURSE IN PHYSICAL MEDICINE AND REHABILITATION. Marriott Hotel Medical Center, Houston. Fee $445. Credit TBA. Contact Carol Soroka or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Urology

March 20-22, 1987
AMERICAN UROLOGICAL ASSOCIATION SOUTH CENTRAL SECTION SEMINAR. Houston. Fee $300. Category 1, AMA Physician's Recognition Award; 29 hours. Contact Elizabeth Smith, PO Box 25147, Houston, TX 77265 (713) 791-1470

APRIL

Arthritis and Rheumatism

April 24, 1987
THE ST PAUL TEACHING DAY IN RHEUMATIC DISEASES. Wyndham Hotel, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Family Medicine

April 6-11, 1987
FAMILY PRACTICE REVIEW 1987. San Luis Hotel, Galveston, Tex. Fee $500. Category 1, AMA Physician's Recognition Award; 45 hours. Contact Gayle Norris, Learning Center J-34, Office of Continuing Education, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

April 27-May 1, 1987
11TH ANNUAL REVIEW COURSE IN FAMILY PRACTICE. Marriott Hotel at Astrodome, Houston. Fee TBA. Credit TBA. Contact Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

April 11, 1987
DIABETES UPDATE. Wyndham Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

April 23-24, 1987
OCCUPATIONAL LUNG DISEASE. Houston Marriott Medical Center, Houston. Fee TBA. Credit TBA. Contact Vicki Forgac or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Pediatrics

April 3-4, 1987
PEDIATRIC POSTGRADUATE SYMPOSIUM. Houston Marriott Hotel-Medical Center, Houston. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

April 10-12, 1987
24TH ANNUAL PEDIATRICS FOR THE PRACTITIONER. Hyatt Regency, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

April 22-25, 1987
SYMPOSIUM ON OPTIONS IN MANAGING CHILDREN WITH INFECTIONS/7TH ANNUAL NATIONAL PEDIATRIC INFECTIOUS DISEASE SEMINAR. Hilton Hotel, Las Vegas. Fee $300 physicians, $225 residents, fellows, PAs, and pediatric nurse practitioners. Category 1, AMA Physician's Recognition Award; 22 hours. AAFP prescribed. Contact Marian Troup, Department of Pediatrics, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3439

Sports Medicine

April 9-11, 1987
2ND ANNUAL SYMPOSIUM ON REHABILITATIVE SPORTS MEDICINE. Inn on the Park, Houston. Fee TBA. Credit TBA; 18 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

April 6-8, 1987
GARY P. WRATTEN SURGICAL SYMPOSIUM. Location TBA, El Paso, Tex. Fee $150. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Col Silverio Cabellon, Jr, Chief, General Surgery Service, William Beaumont Army Medical Center, El Paso, TX 79920-5001 (915) 569-2698 or (915) 569-2621

MAY

Family Medicine

May 30, 1987
FAMILY PRACTICE: CLINICAL APPROACHES TO COMMON PROBLEMS. Dallas. Contact Linda Spino, PhD, Department of Family Practice and Community Medicine, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2134 or (214) 688-2166

General Medicine

May 9, 1987
MANAGEMENT OF MYOCARDIAL INFARCTION IN THE COMMUNITY HOSPITAL. Dallas. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

May 20, 1987
12TH ANNUAL INFECTIOUS DISEASES SEMINAR. Dallas. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235

Internal Medicine

May 26-29, 1987
10TH ANNUAL INTENSIVE REVIEW OF INTERNAL MEDICINE. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $325. Category 1, AMA Physician's Recognition Award; 28 hours. Contact Ann Parchem, Division of Continuing Education, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Pathology

May 14-16, 1987
CURRENT ISSUES IN SURGICAL PATHOLOGY, VI. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Physical Medicine and Rehabilitation

May 7-9, 1987
5TH ANNUAL CHRONIC PAIN COURSE: EVALUATION AND MANAGEMENT. Houston. Contact Vicki Forgac or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

JUNE

Orthopedic Surgery

June 5-7, 1987
SOUTHWESTERN ORTHOPEDIC SURGERY REVIEW. Dallas. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Otolaryngology

June 18-20, 1987
18TH ANNUAL OTOLARYNGOLOGY CONFERENCE. Galveston, Tex. Contact Martha Berlin, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Pediatrics

June 8-12, 1987
ACUTE CARE PEDIATRICS: REVIEW AND UPDATE OF THE STATE OF THE ART. Hilton Head Island, SC. Contact Lila Lerner or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-4941

June 11-13, 1987
1987 ANNUAL PEDIATRIC REVIEW AND UPDATE. Galveston, Tex. Contact Gayle Norris, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award;

40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Saturdays, 9 am-12 pm (Oct 25, 1986-May 2, 1987)
FUNDAMENTALS OF PRACTICAL THERAPEUTICS. Cullen Auditorium, Baylor College of Medicine, Houston. Fee $295 physicians, $100 residents and fellows. Category 1, AMA Physician's Recognition Award; 72 hours. AAFP prescribed. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN CLINICAL NMR. Biomedical NMR Center, Baylor College of Medicine, Houston. Fee $1,000; $500 lecture series only. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Biomedical NMR Center, The Woodlands, Tex. Fee $800 physicians, $400 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

JANUARY

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Jan 17, 1987, Four Seasons Hotel—Houston Center, Houston

MARKETING TECHNIQUES FOR A SUCCESSFUL PRACTICE—6 hours
Jan 20, 1987, The Worthington Hotel, Fort Worth
Jan 21, 1987, La Mansion del Norte, San Antonio
Jan 22, 1987, Houston Marriott—By the Galleria, Houston

FEBRUARY

MARKETING TECHNIQUES FOR A SUCCESSFUL PRACTICE—6 hours
Feb 17, 1987, Embassy Suites, Austin
Feb 18, 1987, Holiday Inn Civic Center, Lubbock
Feb 19, 1987, Dallas Marriott Park Central, Dallas

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Feb 21, 1987, The Summit Hotel, Dallas

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
Feb 24, 1987, Bexar County Medical Society Headquarters, San Antonio
Feb 25, 1987, Corpus Christi Marriott, Corpus Christi
Feb 27, 1987, Sheraton Harlingen Inn, Harlingen

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
Feb 24, 1987, Bexar County Medical Society Headquarters, San Antonio
Feb 25, 1987, Corpus Christi Marriott, Corpus Christi
Feb 27, 1987, Sheraton Harlingen Inn, Harlingen

CALENDAR OF MEETINGS ■Denotes Texas Meetings

JANUARY

5TH ANNUAL SOUTHWEST REGIONAL HEAD INJURY SYMPOSIUM, Cancun, Mexico, Jan 14-18, 1987. Victoria Berry, 1106 W Dittmar, Austin, TX 78745 1-800-252-2878

AMERICAN ACADEMY OF PSYCHOANALYSIS ANNUAL MEETING, New York, Jan 15-18, 1987. Myron Gluckman, MD, Chairman, Committee on Programs, 30 East 40th St, Suite 608, New York, NY 10016 (212) 629-4105

■AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER ANNUAL MEETING, Houston, Jan 29-31, 1987. Edward Saltzstein, MD, Department of Surgery, Texas Tech University Health Sciences Center, 4800 Alberta St, El Paso, TX 79905 (915) 533-3020, ext 284

AMERICAN DIABETES ASSOCIATION MEETING, Orlando, Fla, Jan 26-28, 1987. Andrea Simon, 1660 Duke St, Alexandria, VA 22314 (703) 549-1500, 1-800-232-3472

AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY INTERIM POSTGRADUATE COURSE, Washington, DC, Jan 30-Feb 1, 1987. William Maloney, Executive Director, 13 Elm St, Manchester, MA 01940 (617) 927-8330

AMERICAN SOCIETY FOR SURGERY OF THE HAND WINTER MEETING, San Francisco, Jan 19-21, 1987. ASSH, 3025 S Parker Rd, Suite 65, Aurora, CO 80014

AMERICAN SOCIETY OF ABDOMINAL SURGEONS ANNUAL MEETING, Tampa, Fla, Jan 29-31, 1987. Blaise Alfano, MD, 675 Main St, Melrose, MA 02176 (617) 665-6102

■DIABETES AMONG MEXICAN-AMERICANS IN TEXAS, TEXAS DIABETES COUNCIL CONFERENCE, Austin, Tex, Jan 29, 1987, in conjunction with American Diabetes Association, Texas Affiliate; Hogg Foundation for Mental Health; National Coalition for Hispanic Mental Health and Human Services Organizations; South Texas Geriatric Education Center; and Texas Department of Health. Margaret Mendez, Texas Department of Health, 1100 W 49th St, Austin, TX 78756 (512) 458-7534

■TEXAS SOCIETY OF PATHOLOGISTS ANNUAL MEETING, Arlington, Tex, Jan 30-Feb 1, 1987. Iris Wenzel, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

FEBRUARY

■11TH ANNUAL CONFERENCE ON ALCOHOLISM AND DRUG ABUSE, El Paso, Feb 4-6, 1987. Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 473-2929

12TH INTERNATIONAL JOINT CONFERENCE ON STROKE AND CEREBRAL CIRCULATION, Tampa, Fla, Feb 26-28, 1987. Leonard Cook, American Heart Association, 7320 Greenville Ave, Dallas, TX 75231 (214) 750-5437

AMERICAN ACADEMY OF ALLERGY AND IMMUNOLOGY 43RD ANNUAL MEETING, Washington, DC, Feb 20-25, 1987. Donald McNeil or Richard Iber, 611 E Wells St, Milwaukee, WI 53202 (414) 272-6071

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION ANNUAL MEETING, New Orleans, Feb 3-7, 1987. Todd Zegel, 25 E 21st St, 6th Floor, New York, NY 10010 (212) 477-2677

AMERICAN PHYSICAL THERAPY ASSOCIATION COMBINED SECTIONS MEETING, Atlanta, Feb 12-15, 1987. Bonnie Polvinale, 1111 N Fairfax St, Alexandria, VA 22314 (703) 684-2782

AMERICAN SOCIETY FOR PARENTERAL AND ENTERAL NUTRITION 11TH CLINICAL CONGRESS, New Orleans, Feb 1-4, 1987. Kelly Tilton, ASPEN, 8605 Cameron St, Suite 500, Silver Spring, MD 20910 (301) 587-6315

■FAMILY HEALTH IN CRISIS: HEALTH AND HUMAN SERVICE ISSUES IN THE 70TH LEGISLATURE. Austin, Feb 2, 1987. Nancy Young, RN, Dept of Pediatrics, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235-9063

■TEXAS ASSOCIATION OF OBSTETRICS AND GYNECOLOGY ANNUAL MEETING, Fort Worth, Feb 25-28, 1987. Robert Wernecke, MD, #403 Medical Park Tower, 1301 W 38th St, Austin, TX 78705 (512) 454-5221

■**TEXAS MEDICAL ASSOCIATION WINTER CONFERENCE**, Austin, Feb 6-8, 1987. Robert G. Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

UNIVERSITY ASSOCIATION FOR EMERGENCY MEDICINE ANNUAL RESEARCH SYMPOSIUM, Clearwater Beach, Fla, Feb 21-24, 1987. Mary Ann Schropp, 900 W Ottawa, Lansing, MI 48915 (517) 485-5484

MARCH

2ND INTERNATIONAL INTERDISCIPLINARY CONFERENCE ON HYPERTENSION IN BLACKS, Atlanta, March 5-7, 1987. Emory University School of Medicine, Continuing Medical Education, 110 WHSCAB, 1400 Clifton Rd, Atlanta, GA 30322 (404) 727-5695

AMERICAN ASSOCIATION OF IMMUNOLOGISTS ANNUAL MEETING, Washington, DC, March 29-April 3, 1987. Dr Joseph Saunders, 9650 Rockville Pike, Bethesda, MD 20814 (301) 530-7178

AMERICAN ASSOCIATION OF PATHOLOGISTS, INC, ANNUAL MEETING, Washington, DC, March 29-April 3, 1987. Dana Raitt, 9650 Rockville Pike, Bethesda, MD 20814 (301) 530-7130

AMERICAN COLLEGE OF CARDIOLOGY 36TH ANNUAL SCIENTIFIC SESSION, New Orleans, March 8-12, 1987. ACC, 9111 Old Georgetown Rd, Bethesda, MD 20814 (1-800) 253-INFO

AMERICAN COLLEGE OF MEDICINE 6TH ANNUAL MEETING, Las Vegas, March 15-20, 1987. John Bellows, MD, PhD, 211 East Chicago Ave, Suite 1044, Chicago, IL 60611 (312) 787-3335

■AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER ANNUAL MEETING, Dallas, March 6-7, 1987. Michael McArthur, MD, 214 E. Houston, Tyler, TX 75072 (214) 597-3796

AMERICAN HEART ASSOCIATION 27TH ANNUAL CONFERENCE ON CARDIOVASCULAR DISEASE EPIDEMIOLOGY, Charleston, SC, March 19-21, 1987. Leonard Cook, AHA, 7320 Greenville Ave, Dallas, TX 75231 (214) 750-5437

AMERICAN MEDICAL STUDENT ASSOCIATION ANNUAL MEETING, New Orleans, March 18-22, 1987. Jeffrey Stolz, 1910 Association Dr, Reston, VA 22091 (703) 620-6600

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS ANNUAL MEETING, Orlando, Fla, March 25-28, 1987. Elaine Galasso, 1718 Gallagher Rd, Norristown, PA 19401 (215) 825-3838

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY 22ND ANNUAL MEETING, Las Vegas, March 15-20, 1987. John G. Bellows, MD, PhD, 211 East Chicago Ave, Suite 1044, Chicago, IL 60611 (312) 787-3335

INTERNATIONAL ACADEMY OF PATHOLOGY, UNITED STATES AND CANADA DIVISION ANNUAL MEETING, Chicago, March 8-13, 1987. Nathan Kaufman, MD, 3515 Wheeler Rd, Building C, Suite B, Augusta, GA 30909 (404) 733-7550

LEUKEMIA SOCIETY OF AMERICA 3RD NATIONAL MEDICAL SYMPOSIUM, San Diego, Calif, March 18-21, 1987. M. Louise Toglia, Medical Programs Department, 733 Third Ave, New York, NY 10017 (212) 573-8484

■SINGLETON SURGICAL SOCIETY 34TH ANNUAL MEETING, Galveston, March 5-7, 1987. Susan Royal, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

SOCIETY OF NUCLEAR MEDICINE, SOUTHWESTERN CHAPTER ANNUAL MEETING, Little Rock, Ark, March 26-29, 1987. Justine Jean Parker, PO Box 40279, San Francisco, CA 94140 (415) 647-1668

■TITUS HARRIS SOCIETY 27TH ANNUAL MEETING, Austin, March 5-8, 1987. Susan Royal, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Is your malpractice insurance geared to the past, instead of the future?

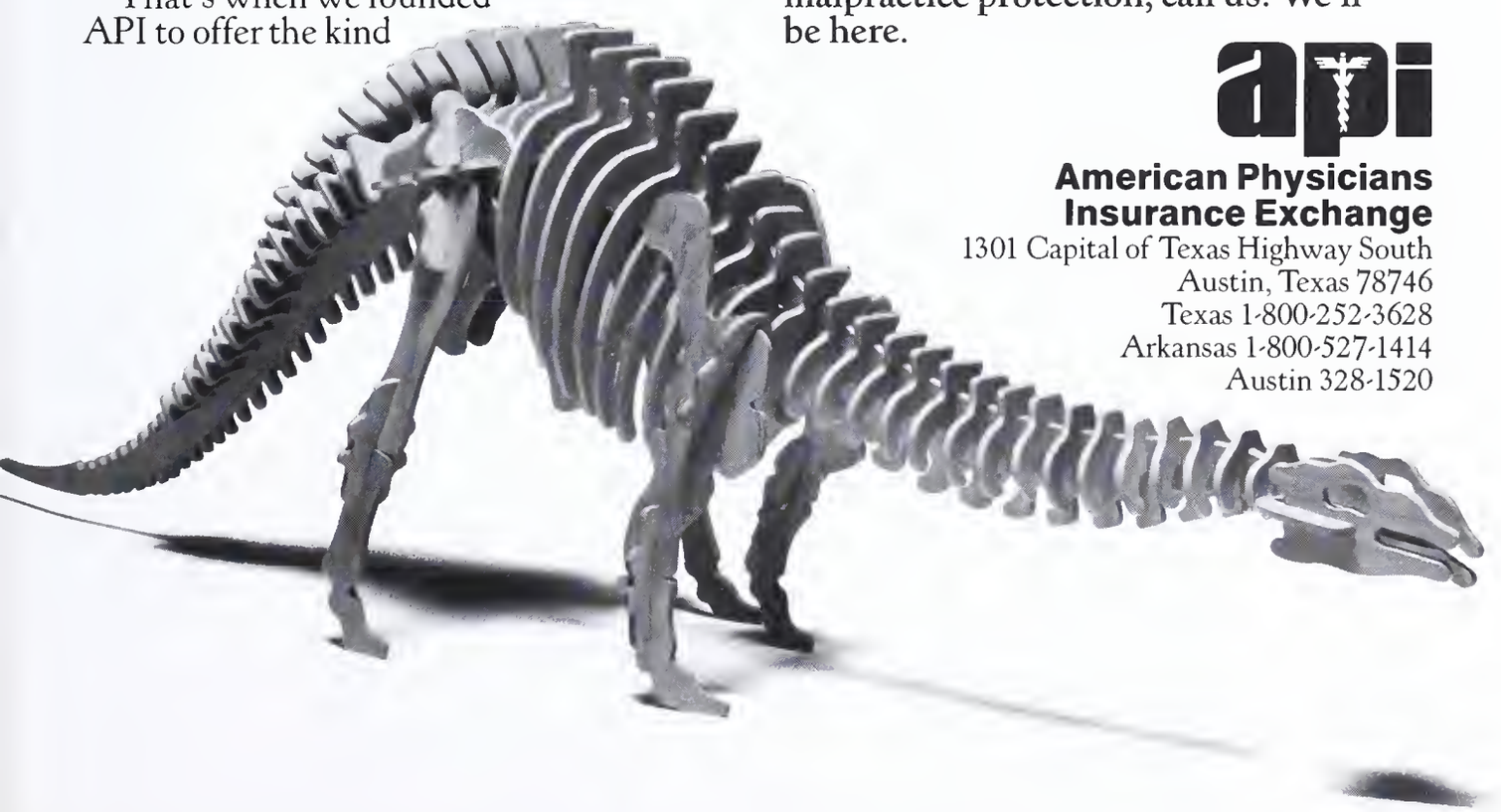
Protecting today's physicians from the onslaught of malpractice litigation is a new game. Back when malpractice lawsuits were rare, old insurance companies sold malpractice policies to just about anyone. Cheap.

Then the malpractice crisis of 1975 appeared—and the new age of malpractice protection arrived. Some of the old insurance companies knee-jerked away from their commitment to Texas and Arkansas physicians.

That's when we founded API to offer the kind of complete protection that the old insurers didn't offer. For all specialties. With ample limits. API plans to offer this complete protection in 1995, 2005 and beyond. Modern, complete insurance coverage must adapt to change. And in malpractice insurance, complete protection is all that counts.

You don't have to settle for less. API guarantees complete protection for today and the future.

When you're ready for complete malpractice protection, call us. We'll be here.



api

American Physicians Insurance Exchange
1301 Capital of Texas Highway South
Austin, Texas 78746
Texas 1-800-252-3628
Arkansas 1-800-527-1414
Austin 328-1520

S&W SCOTT&WHITE

Texas A&M University
College of Medicine

UPDATE '87:
OFFICE GYNECOLOGY AND OBSTETRICS

Shadow Ridge Resort and Conference Center

PARK CITY, UTAH

March 1-7, 1987

Third Annual
FAMILY MEDICINE REVIEW

Selected Topics
With Testing Techniques
for Board Exams

Four Seasons Hotel
AUSTIN, TEXAS

April 22-26, 1987

For more information or to register contact: Office of Continuing Medical Education, Scott and White, Temple, Texas 76508, (817) 774-4073.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223 214/381-7181

EBRUARY 1987

TexasMedicine

16 TMA News Hotline: 1-800-252-7003

25 Pelvic inflammatory disease in adolescents

32 How bar codes promote safe blood supplies

51 Cancer Update: Management of advanced bladder cancer

5, 17, 73 The case for tort reform

TORT

THE LIBRARY
ACQUISITIONS DIV.-SERIALS
UNIV. OF CALIF-SAN FRANCISCO
SAN FRANCISCO CA 94143

****

Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080

A Referral Center for Cardiopulmonary Diseases

Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address: P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

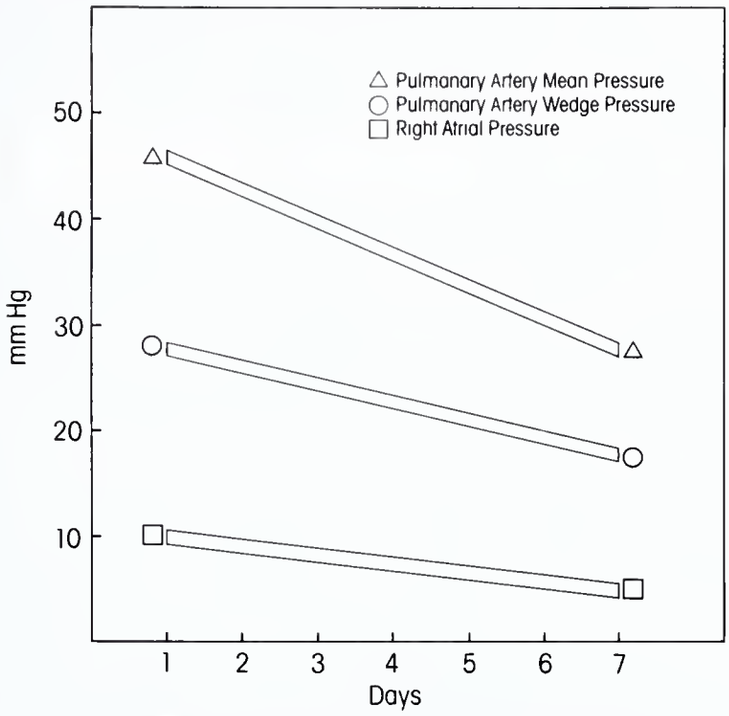
Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml
and 10-ml vials (0.25 mg/ml)

REDUCES FLUID OVERLOAD and eases the burden on the failing heart

Significantly improves hemodynamics



Ten patients with CHF showed marked hemodynamic improvement after seven days of BUMEX® (bumetanide/Roche) (mean values ± SE). Adapted from Olesen, *et al* [1]

References: **1.** Olesen KH, *et al Postgrad Med J 51*(Suppl 6):54-63, 1975. **2.** Handler B, Dhingra RC, Rasen KM: *J Clin Pharmacol 21* 706-711, Nov-Dec 1981. **3.** Brater DC, *et al Clin Phormacol Ther 34* 207-213, Aug 1983. **4.** Brater DC, Fox WR, Chennavasin P: *J Clin Pharmacol 21* 599-603, Nov-Dec 1981. **5.** Davies DL, *et al: Clin Pharmocol Ther 15* 141-155, Feb 1974.

BUMEX®
bumetanide/Roche
0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

BUMEX® (bumetanide/Roche)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome
Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.
Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.
CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.
WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels.
Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.
Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use: Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.
HOW SUPPLIED: *Tablets,* 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Paks of 30, Tel-E-Dose® cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.
Ampuls, 2 ml, 0.25 mg/ml, boxes of ten.
Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

ROCHE®
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

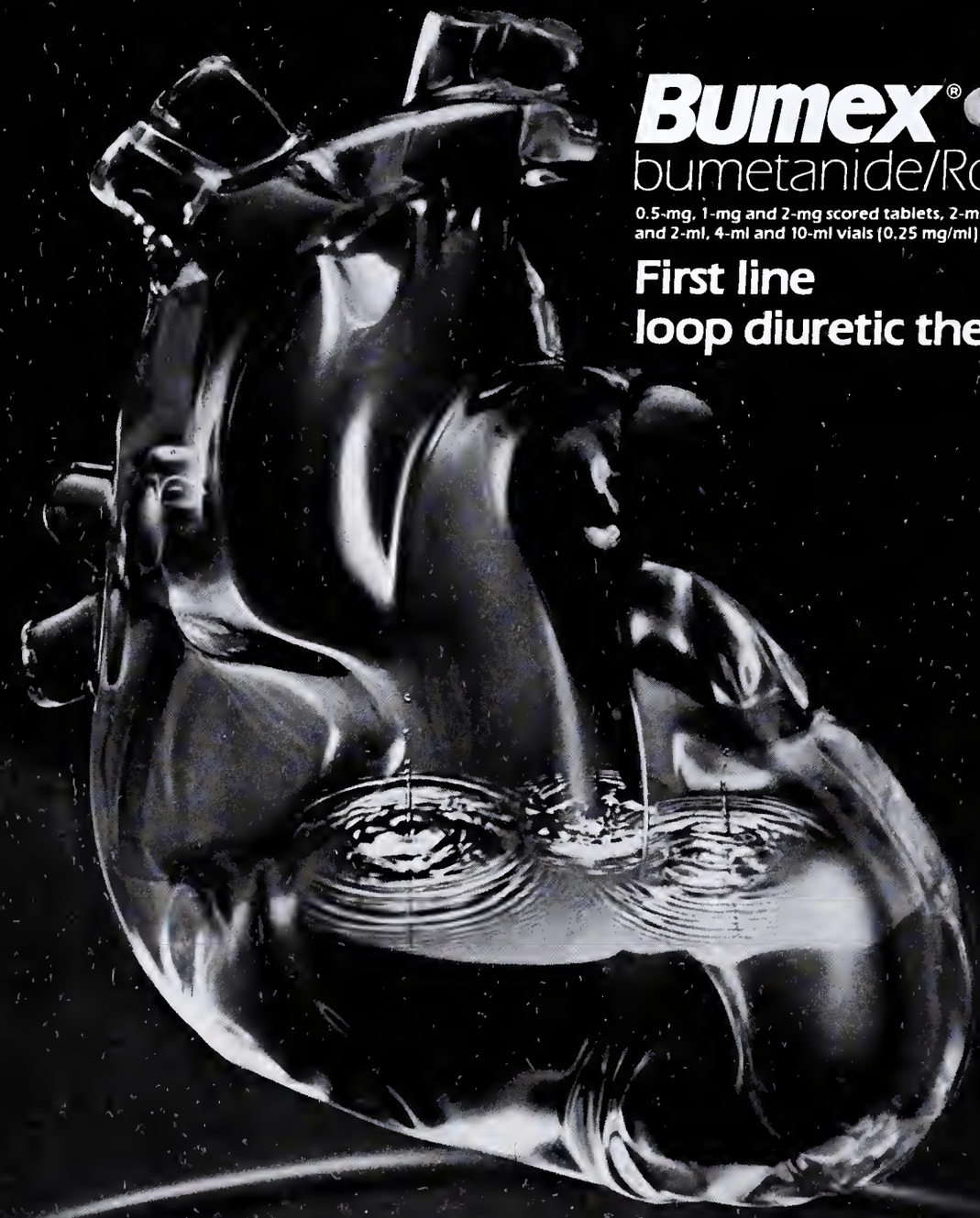
ROCHE

OVERLOAD

Reduce fluid volume and improve hemodynamics in CHF

Edema due to congestive heart failure often demands highly effective diuresis to reduce the fluid load on the failing heart. Bumex® (bumetanide/Roche) is the next generation in loop diuretic therapy for three powerful reasons. It moves out an unsurpassed volume of fluid and sodium, resulting in significant reductions in edema and right atrial and pulmonary artery wedge pressures.[1,2] It's almost completely absorbed through the GI tract, so it's easy to titrate.[3] And Bumex completes high-volume diuresis fast—within four hours at usual doses.[4,5] Your patients spend less time in diuresis, more time in normal activities.

Bumex has a good safety profile; however, as with all loop diuretics, Bumex, if given in excessive amounts, can lead to profound diuresis with water and electrolyte depletion, including hypokalemia. Serum electrolytes should be monitored periodically, especially in patients on low salt diets or those treated for prolonged periods or on high doses.



Bumex®
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets, 2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

First line loop diuretic therapy

Please see references and summary of product information on preceding page.

Copyright © 1986 by Hoffmann-La Roche Inc. All rights reserved.

TexasMedicine

VOLUME 83 FEBRUARY 1987

Contents

ARTICLES

25 Pelvic inflammatory disease in the adolescent
Bernard Gonik, MD; Susan Pokorny, MD; Sylvia Garcia, MD; Kathy Walsh, RN

27 Drug treatment of pneumonia due to *Pneumocystis carinii*
David Huffman, MD; Daniel M. Musher, MD; Allen G. Reuben, MD

32 Blood donor screening for AIDS: self-exclusion with bar codes
Bill T. Teague, BS, MT(ASCP)SBB; Pablo J. Fortes, BS(ASCP)SBB; John Drury, BA; Ronald Phillips, MT(AMT)

36 Case report: loiasis 15 years after exposure
Michael S. Oberg, MD; Bernard A. McGowen, MD; David A. Kleiman, MD

38 *Curanderismo* associated with fatal outcome in a child with leukemia
Wallace W. Marsh, MD; Mary Eberle, MD

47 Nuclear weapons and nuclear war: implications for Texas physicians
Alan H. Lockwood, MD

51 Cancer update: Bladder cancer: management of advanced disease
Clayton D. K. Chong, MD

EDITORIALS

5 Legislative tort reform: you make the difference
Rep Mike Toomey

5 Pelvic inflammatory disease in adolescents
Ronald S. Gibbs, MD

6 Medical auxiliaries and the challenge of change
Pat Durham

8 Factors influencing career choice of Texas medical school applicants
Virgil L. Tweedie, PhD; Harold D. Murray, PhD; Jeanne M. Lagowski, PhD; Ray Whiteside, PhD; John C. Little, PhD

SUPPLEMENT

17 The case for tort reform

NEWS

TMA in action
12 AMA delegates consider improvements in Medicare
12 AMA honors ten Texans during interim meeting
13 Philip R. Overton, LLB, dies following long illness
13 Houston hospitality will shine for annual session, May 13–17
15 TMA, THA to sponsor medical staff conference
15 Catalog is handy guide to TMA's audiovisual collection
15 Correction

Health line
15 AMA conference to focus on AIDS strategies

Socioeconomics
16 TSBME calls for CME as requirement for relicensure
16 680,030 Texans eligible for benefits from CHAMPUS

Capital comments
16 News Hotline updates callers on status of medical legislation
16 Public Affairs Division analyzes political makeup of legislature

DEPARTMENTS

9 Letters
68 Clinical abstracts
72 Information for authors
73 Medicine and the law: Medical professional liability in Texas—a primer
78 Deaths
82 Medicine in literature
100 Continuing education directory

ON THE COVER

The subject of this month's cover art is tort reform, a primary component of the solution to the current crisis in the availability and cost of professional liability insurance and one of the most controversial issues before the 70th Texas Legislature. A special supplement, "The Case for Tort Reform," prepared by Texas Medical Association's Division of Public Affairs, is included in this issue of *Texas Medicine*.

Please pull it out and keep it for reference during the current legislative session. Also in this issue, Rep Mike Toomey (R-Houston) expresses his views on tort reform in an editorial on page 5, and former TMA Staff Attorney Michael G. Young, JD, explains the history of tort law in "Medicine and the Law," page 73.

COMING NEXT MONTH

Scheduled for the March issue of *Texas Medicine* are articles dealing with sciatica produced by a sacral perineurial cyst, cutaneous melanoma, suction assisted lipectomy, and teen pregnancy policies and the legislative session. Also scheduled is an article on what to do if you believe your malpractice carrier is insolvent.

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

Harold R. High, MD, Cuero
Secretary

Merle W. Delmer, MD, San Antonio
James M. Graham, MD, Austin
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

Jim Bob Brame, MD, Eldorado
President

Nancy W. Dickey, MD, Richmond
Vice President

David Vanderpool, MD, Dallas
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Robert G. Mickey
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd, Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Shari Henson, Production Manager/Editorial Assistant
Patty Illich, Administrative Secretary/Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
L. Maximilian Buja, MD, Dallas
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates, plus 6 125% state sales tax for Texas subscribers only, are: Nondues-paying members, $16 per year plus $.98 sales tax; non-members and institutions, $20 per year plus $1.25 sales tax; foreign, $24 peryear plus $1.25 sales tax; foreign, $24 US currency; single copy, $2 plus $.13 sales tax.

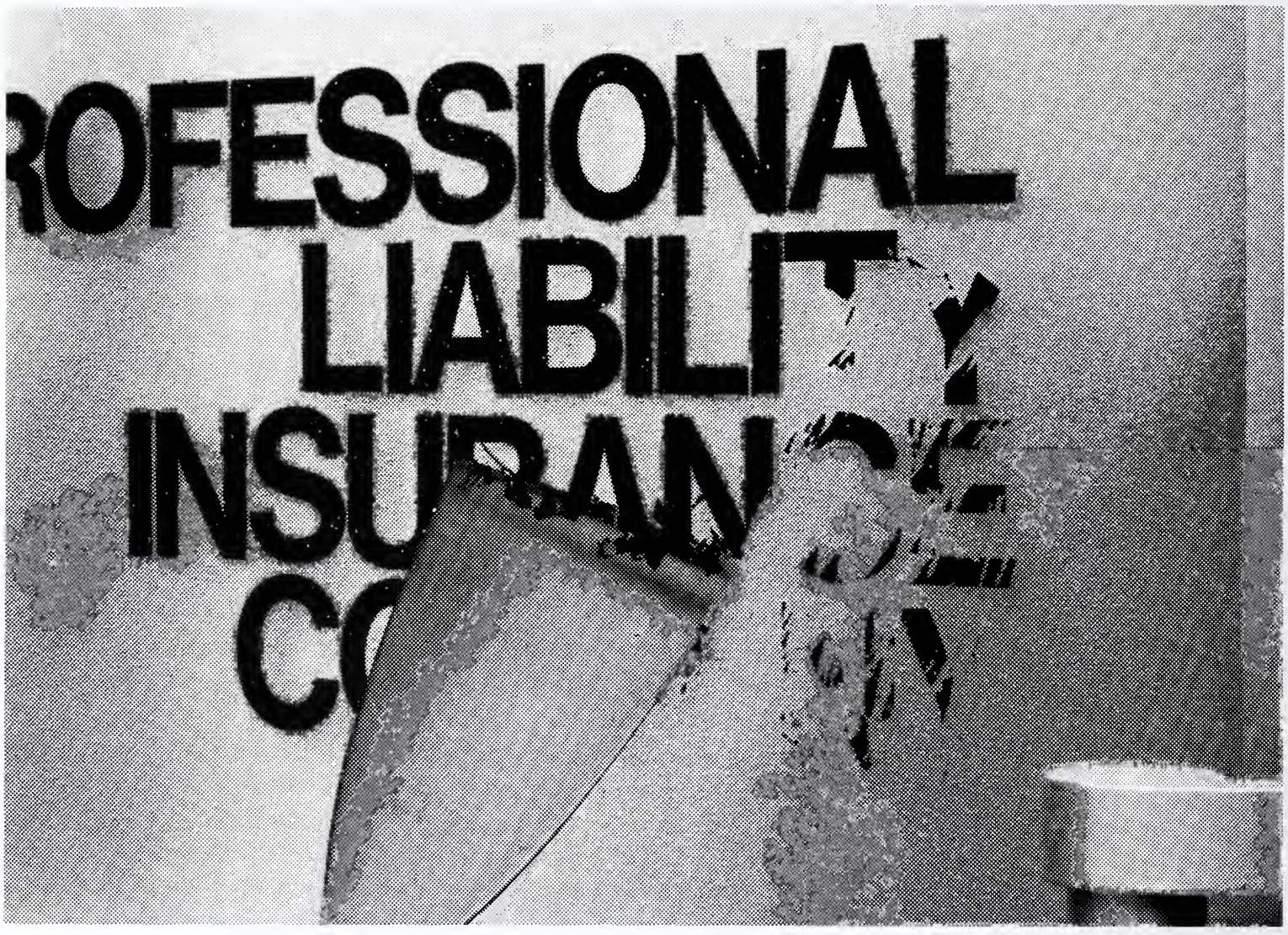
Second class postage paid at Austin, Texas, and additional mailing office

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701



In ten years your malpractice carrier may be just a memory.

Unless it's Medical Protective.

As you consider professional liability insurance, consider this. The coverages stated in the policy are basically a promise — a promise to be here when needed regardless of legal climate or economic conditions. A company's ability to keep this promise is critical because your financial security may depend on it. Unfortunately, too many firms are now finding the task impossible.

Analyze your liability insurance options carefully just as you would any important investment. Go beyond the agent and the policy to the company that stands behind both. How long has it been in operation? Has it weathered some of the tough times? Will it be there for you when you need help?

The Medical Protective Company pioneered professional liability coverage before the turn of the century and has served doctors exclusively ever since. Over 500,000 of them. Through good times and bad. We'll be here when you need us.

Contact The Medical Protective Company through one of our general agents. History shows we keep our promises.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

Wayne L. Kirk, Richard B. Ross
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

Legislative tort reform: You make the difference

Most physicians know that the present malpractice system is grossly unfair. Some have endured the trauma and expense of an ill-founded lawsuit. Most have felt the anger caused by unreasonably large premium increases, and they know the pain of having their professional behavior closely scrutinized and subjected to an unreasonable degree of suspicion. And, there are a good number of family doctors—37% in a recent survey by Texas Medical Association—who have been forced to make that most difficult of professional decisions—that of abandoning obstetrical practice. Additionally, 14% of Texas' obstetricians-gynecologists, who spent years in specialized training, have stopped delivering babies.

On the face of it, then, the case for medical malpractice reform seems very strong. Certainly no one disputes that malpractice premiums have risen at an astronomical rate over the past five years. And, it would be very difficult to argue that those increases have not increased cost and decreased the availability of health care.

It would be a serious mistake to assume that comprehensive malpractice reform will succeed simply because the case for it is strong and there are many doctors who can corroborate the system's problems and negative impacts. The fact is that the legislative obstacles currently facing tort reform are substantial. Even if a comprehensive package successfully clears both legislative houses and the Governor signs it, there is the possibility that the Texas Supreme Court would strike down some—or all—of it.

Unless a broad-based, grassroots outpouring of support for tort reform is forthcoming, it is likely that the effort will fail in the Texas Senate. Because it is hard to imagine a public policy issue that will affect doctors' practices more than the upcoming struggle over tort reform, it is essential that a large number of physicians voice their strong support for tort reform to their representatives and senators. The Texas Medical Association and Texas Civil Justice League are excellent organizations and their lobbyists are capable professionals. But, reliance on organized lobbying—even very competent lobbying—simply will not be enough.

Physicians who wish to influence the process in favor of the tort reform effort must convey the argument that will be most persuasive to their senators and representatives—how it affects patients. Most legislators will not be convinced by arguments based on the cost of premiums. They don't care if physician income is being diminished by sharply rising premiums. They do care that the cost and availability of liability insurance, as well as the fear of suit, limit access to and quality of medical care. Your legislator will be more inclined to support these reforms if he is persuaded that these changes will make the system better. The accompanying supplement to *Texas Medicine* includes studies that clearly establish that the crisis is real, and that the problem largely is a result of a civil justice system that shuns fault-based decisions, pays too much money to the wrong people, and fails to deter frivolous or groundless suits.

There is ample documented proof that the current malpractice crisis limits medical care; you see it every day in your clinic or your hospital. Poor women and children are finding it more difficult to receive even the most basic health care services. Women in rural areas are discovering that fewer and fewer family doctors are willing or financially able to accept the added risks and costs of delivering babies. And, individuals who require high-risk specialty treatment are finding that costs are increasing while availability is decreasing. Tell your legislator about it—your own experiences, in your own words. It's in your best interest and in your patients' best interest.

If tort reform succeeds during this legislative session, the margin of victory will be extremely narrow. Physicians concerned about the costs and risks of professional liability must realize that strong public pressure is the only thing that will guarantee passage. You must work closely with your state association to vigorously lobby your representatives and senators. And physicians should tell their patients, friends, and legislators that failure to pass meaningful tort reform will hurt them, too.

You, as physicians, cannot assume that the legislature will do what is right just because it's right. The public alone—and concerned physicians in particular—can make the difference between success and failure in this important effort.

REP MIKE TOOMEY (R-HOUSTON)
PO Box 2910, Austin, TX 78769.

Pelvic inflammatory disease in adolescents

In this issue, Dr Bernard Gonik and colleagues address a problem of major national interest, namely pelvic inflammatory disease. Their focus is a high-risk group—the teenager.

Pelvic inflammatory disease (PID) occurs in an estimated 1 million women per year in the United States, but because it is not a reportable disease there may actually be up to 3 million cases annually. PID accounts for over 250,000 hospitalizations annually, and the total annual cost due to this disease is approximately $3 billion.

One of the recognized risk factors is age under 20 years. In Sweden, one third of cases occurred in teenagers and the risk for PID was 1:8, ten times more common than the risk in women 24 years of age and older. The reasons for the increased risk are not clear, but it is suspected that upper genital tract infection is more likely when sexually transmitted organisms are first acquired—before host defenses localize them to the lower genital tract.

Other recognized risk factors for PID include intrauterine device (IUD) use, multiple sexual partners, and previous history of PID or of gonorrhea. IUD users have a threefold to fivefold increase in risk. Although patients with previous PID are at increased risk for recurrence, they are also at increased

risk for ectopic pregnancy. Since the latter often presents with many similar signs and symptoms, misdiagnosis of ruptured ectopic pregnancy is a serious danger.

Work in the last decade has revealed that PID is polymicrobial in etiology, involving *Neisseria gonorrhoeae, Chlamydia trachomatis*, aerobes, anaerobes, genital mycoplasmas, and occasionally *Actinomyces* organisms. Of the 49 patients reported by Dr Gonik, nearly half had gonococcal disease. Varying widely among centers, the prevalence of *N gonorrhoeae* in patients with PID runs from 20% to 80%. In general, gonococcal PID is more likely to be accompanied by fever and peritonitis. The high rate of pelvic masses (49%) is similar to the rate reported in Sweden by Jacobsen and Westrom (2), but it is a higher rate than reported in many US studies. Gonik et al argue that the likelihood of an infected mass suggests the process had been ongoing. Further, the high rate of major surgery (14%) adds strength to their argument.

Recent studies have noted diagnostic errors in PID of 10% to 35% when clinical criteria alone are used (2). Accordingly, laparoscopy has been advocated by some as the optimal method for diagnosis. In the US, however, universal laparoscopy has not been employed. As a minimum, it is important to perform a laparoscopy when the differential diagnosis is uncertain and when the response to therapy is poor. Laparoscopy is safe and effective in patients with PID.

There are no standard treatment regimens for PID, although the Centers for Disease Control (CDC) has suggested several combination therapies based upon our improved knowledge of etiology (3). For inpatient therapy, clindamycin plus gentamicin or cefoxitin plus doxycycline are included. Although there has not been published documentation of the efficacy of these drug therapies, both appear to be reasonable, and studies are under way. For outpatient therapy, a single dose of cefoxitin or amoxicillin or ampicillin or aqueous penicillin G (each with probenecid) or cefotaxime followed by oral doxycycline or tetracycline have been advised. Careful follow-up and treatment of sexual partners are essential.

Sequelae of PID include recurrence, ectopic pregnancy, and infertility. Ectopic pregnancy is increased approximately sixfold, and tubal causes of infertility increase with the number of episodes. Tubal infertility develops in about 15% of women with one episode of PID and in 75% of those with three or more episodes (4).

Especially in the high-risk group of teenagers, the following approach is in order. First, teach patients to understand the risks of multiple partners and to avoid IUDs. Second, have a high index of suspicion for PID in sexually active teenagers. Over half of cases will *not* be accompanied by fever. Third, in view of the risk of tubal damage leading to ectopic pregnancy and infertility and the risk of surgical intervention for abscess, early admission to the hospital and treatment with parenteral antibiotics should be considered in all teenagers with PID. Finally, a system of follow-up should be encouraged to give special care and continuing education.

RONALD S. GIBBS, MD
Department of Obstetrics and Gynecology, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284.

REFERENCES
1. Sweet RL: Pelvic inflammatory disease, in Sweet RL, Gibbs RS (eds): Infectious Diseases of the Female Genital Tract. Baltimore, Williams and Wilkins, 1985.
2. Jacobson L, Westrom L: Objectivized diagnosis of acute pelvic inflammatory disease. Gynecol 105:1088, 1969.
3. 1985 Sexually Transmitted Disease Treatment Guidelines. MMWR 34(Suppl 4):75S–108S, 1985.
4. Westrom L: Effect of acute pelvic inflammatory disease on fertility. Am J Obstet Gynecol 121(5):707–713, 1975.

Medical auxiliaries and the challenge of change

Much has been said about the changing environment of medicine in the past few years. It strikes me that it has always been so—that medicine has always faced change and challenge. In 1969—when the impact of Medicaid was just sinking in—we as members of the medical family began to get active in a way we have come to take for granted today. We realized the importance of being informed and involved in legislative issues that relate to health care.

By the late 70s, medical associations were trying to come to grips with the rising health care costs that had physicians and hospitals alike under fire from all directions. The AMA and state medical associations were joining hospital associations in the "voluntary effort," a program designed to reduce the cost of health care. Medical auxiliary members were recruited to serve as liaison members to medical association committees and to help in educational programs promoting preventive health care.

Today there are still problems to be solved, changes to be coped with, challenges to be faced—among them, professional liability, competition in health care, and government regulations. There is increasing patient awareness, and with it, a distrust of the medical profession as a whole. But underlying these issues is a bigger one: how to ensure that the people of this nation continue to receive the quality medical care to which they have become accustomed. The challenges that face the medical community face every person in this country today. Furthermore, if those challenges are not faced squarely and settled reasonably, it is the patients who may be the greatest losers of all.

While there always have been and always will be change and challenge, we have a great responsibility to help see that the changes facing medicine today work to the advantage of physicians and their patients. To do that we must accept the challenge of change and recognize the need for change.

In accepting the challenge of change, we first must realize that change isn't all bad. Think back to the earlier days of medicine when infectious disease was *the* problem facing physicians. For patients, it was often a killer. Yet by accepting their challenge, scientists helped eliminate diphtheria, smallpox, even poliomyelitis, in many parts of the world.

Change has been responsible for other advances in science

and technology that have brought improved quality of life to all of us, from the spacecraft that investigate worlds we can only imagine to computers that click out answers to questions we couldn't even think of a few years ago.

In 1969 Neil Armstrong stepped out of a spacecraft and took man's first step on the moon. On earth, we saw him and heard him speak. We live in a world where we can walk into a room, flip a switch, and have light or heat or air conditioning. We hardly raise an eyebrow when physicians give the gift of life with a heart or liver or kidney transplant or the gift of sight with a cornea transplant. These accepted accomplishments would have been scoffed at when the first medical auxiliaries were created. Who would have thought them possible? And the next 60 years will bring many more advances—because someone accepts the challenge of change.

Accepting the challenge of change also means recognizing that there are things we cannot change. Health care will not always be delivered in the traditional manner. There will be varied methods of payment and reimbursement. There will be others who call the shots on who does what and when. There will be competition and pressures on physicians. These are things we cannot change. Our task is to recognize what we cannot and what we can change, to accept the one and act on the other, because in doing so we have the best chance to make change work for us.

In addition to accepting the challenge of change, we must recognize the need to change, for we face circumstances both inside and outside of our organization that call for us to consider new ways of thinking and working. Consider the circumstances within the AMA Auxiliary.* In a time when one third of medical school graduates are women, the auxiliary can no longer tailor all of its programs to women. In a time when some one fourth of physicians' families are two-paycheck families, we can no longer target programs only to those who choose home over career. In a time when people no longer involve themselves and their shrinking volunteer hours in nonproductive activities, we cannot ignore the need for meaningful programs. In a time when people are selective and want a return on their investment of dues and time, we cannot simply maintain the status quo. While we value the heritage on which we have built this nationwide network of medical auxiliaries, the circumstances around us demand that we look at our programs at all levels of this organization, change our structure if necessary to attract new constituencies, vary meeting times and days, be innovative and nonsexist in program planning, and make every effort to discover the needs of all of our members and potential members and encourage them to join our cause.

We must also be willing to change to accommodate the circumstances surrounding our organization. We must, for example, help our medical associations in legislative efforts. We may not win every health-related decision coming out of the federal or state legislatures, but by working closely with the AMA and state medical associations we can and will affect many decisions that will ensure that the quality of health and medical care is not eroded in this time of change.

We must work to see that the people in our communities continue to receive the health services they need so that the gaps left by cuts in federal spending do not diminish the health of those around us. We must also continue to raise funds for medical students and schools so that these changing times do not erode the high standard of medical education we have worked so hard to establish.

We must accept the challenge of change and the need to change. But we also have another task: We must respect the medical auxiliary as the organization through which we can bring about change and meet the challenges of today. I believe we are living in a time when physicians' spouses cannot afford *not* to belong to the auxiliary. Every physician's spouse today can benefit from what we offer, from programs and projects to be tackled by either sex, and from the meaningful opportunities to improve the communities in which we live. Medical auxiliary members can benefit from opportunities to influence legislation to assure the highest quality health care for all Americans—legislation that will benefit not only physicians, but which will make quality health care a reality for all. They can benefit from the personal return on their membership investment and from the opportunities to improve management, organizational, and creative skills. They can benefit from the contact with others, from representation, from leadership training, from information on issues, from opportunities to work with medical associations in cooperative efforts.

Medical auxiliaries were founded to encourage fellowship among physicians' families. Today we are a driving force to ensure good health and quality health care for all in this country. Tomorrow we will be even stronger as we work with the AMA, TMA, and county medical societies to keep the practice of medicine and the quality of health care at the highest level we can.

A good friend of mine taught me a phrase that I like, and I've found it to be true, especially when I'm facing what seems an insurmountable task. It says, "To have begun is half done. So, begin."

The time for us to begin is now, for the changes facing medicine today mean there are no guarantees for the future, only opportunities. And every member of the medical community must be involved in seizing those opportunities to turn change to advantage. With its nationwide network, medical auxiliaries are the only organizations equipped to help physicians' spouses influence the challenges of today. We must mobilize our forces. We must actively participate, and we must move closer to reaching the goal we share with the medical profession to preserve quality health care for the future good of every citizen of this nation.

The moment is now. The year is ahead. The tasks are many. Our goals are clear. To have begun is half done. So let us begin!

PAT DURHAM
President, American Medical Association Auxiliary, 1151 Bingle Road, Houston, TX 77055.

*Editor's note: This editorial was adapted from Mrs Durham's inaugural address to the AMA Auxiliary.

Factors influencing career choice of Texas medical school applicants

Both physicians and undergraduate premedical advisors play key roles in the guidance of young people toward a career in medicine. The roles are different, but complementary.

The Texas Association of Advisors for the Health Professions recently completed a study of state residents who applied to Texas medical schools in 1981 and 1982 (1–4). The study group, which included both accepted and nonaccepted applicants, was representative of the entire applicant pool. This study was supported by a grant from the Josiah Macy, Jr. Foundation.

Each participant completed a questionnaire eliciting information concerning personal data, family background, extracurricular experiences, motivational influences, and parental education and occupation. Data were collected prior to medical school admission decisions. Of the 467 participants, 61.1% were accepted as first-time applicants. The conclusions reported here are based on statistically significant findings.

Physicians strongly influence career decisions of young people. This is eminently logical. Health-related work experience, personal experience with accident and/or illness, and direct personal contact with a physician (other than a relative) were ranked as the top three influences. Physicians usually counsel—and motivate—students in the absence of accurate academic information and are generally unaware of changes occurring in the medical school admission process; this may explain why more nonaccepted than accepted applicants rated a physician as the most significant influence (12.1% vs 5.3%), or among the top three (41.8% vs 31.4%). When these students enter college, premedical advisors find them to be highly motivated but often with unrealistic perceptions of their academic abilities. Unlike physicians, advisors have access to academic records, have the perspective to interpret course loads and grades from their institutions, and regularly communicate with medical school admissions officers concerning various changes. Only 2.5% of the applicants identified premedical advisors as the most significant influence on their career decision. Since 60% of the study group seriously considered medicine prior to entering college and 30% made a definite decision prior to college, most students consulted their advisors for realistic assessment of their *potential* to study medicine and/or for guidance in maximizing their chances of acceptance. Physicians clearly motivate students toward medicine, but caution should be exercised so as not to give them false hope.

The rate of acceptance to medical school increased with parental educational level. Acceptance rates based on the father's highest educational level are illustrative: high school, 53%, and graduate study, 66%. Of those with a physician as a father (approximately 11%), 71% were accepted, which is 10% higher than the acceptance rate for the entire study group. Similarly, children of other professionals, mothers or fathers, were also accepted at a higher rate than was the study group. However, since these data reflect complex social interactions, capable students interested in medicine should be encouraged regardless of their parents' educational and/or occupational level.

Personality traits were assessed using five standard personality inventories (2). Male applicants were compared to the general male population, female applicants to the general female population, accepted males to nonaccepted males, and accepted females to nonaccepted females. Differences were found in all of the above comparisons; the following are illustrative. Accepted men were more independent, competitive, and nonconforming and were more comfortable with other people and their ideas than were the nonaccepted men. Accepted women, in comparison to the nonaccepted women, knew themselves and their goals, related comfortably to others, could be independent when necessary, and yet maintained their femininity.

Applicants' self-perceptions were explored with respect to a battery of skills/abilities, some of which correlated with MCAT scores and GPAs, others with several items of the personality inventories. Two findings emerged. First, accepted applicants were more objective than were nonaccepted ones; males assessed their abilities in the cognitive realm somewhat more objectively than did females; and nonminorities were more objective than were minorities. Second, anonymous responses were found to be honest since self-reported, cognitive data matched official records. However, in one-to-one interactions with a physician mentor, some may succumb to the temptation to "save face." "I'm doing OK" could mean anything from "A" to "C" work. Physicians should be alert to this potential problem.

Applicants must demonstrate competence in biology, chemistry, mathematics, and physics to study medicine. This is reflected in both the explicit admission requirements and the MCAT. However, it is not necessary to major in the sciences to demonstrate this competence. Some students' interests and abilities are in the sciences, and they should be encouraged to choose a science major. The tragedy comes when students major in a science because they *believe* (often based on erroneous information) that it will enhance their chances for acceptance, when, in fact, their real interests are in nonscience areas. National data for the 1985 entering class show that 13% majored in a nonscience discipline.

This study leaves no doubt about the importance of students' early involvement with physicians and the medical profession. The identification, nurturance, and preparation of premedical students are ideally team efforts involving both physicians and premedical advisors. Physicians are to be commended for the important role they have assumed; premedical advisors stand ready to provide guidance and academic counseling.

VIRGIL L. TWEEDIE, PHD
Department of Chemistry, Baylor University, Waco, TX. Send reprint requests to Dr Tweedie.

HAROLD D. MURRAY, PHD
Department of Biology, Trinity University, San Antonio, TX.

JEANNE M. LAGOWSKI, PHD
Department of Zoology, The University of Texas, Austin, TX.

RAY WHITESIDE, PHD
Department of Psychology, Abilene Christian University, Abilene, TX.

JOHN C. LITTLE, PHD
Department of Biology, Abilene Christian University, Abilene, TX.

REFERENCES

1. Murray HD, Lagowski JM, Little JC, et al: Profile of the 1981 and 1982 medical school applicants in Texas. Part I. Accepted and nonaccepted applicants: cognitive and demographic patterns. The Advisor 3(4):12–21, 1983.
2. Little JC, Whiteside R, Lagowski JM, et al: Profile of the 1981 and 1982 medical school applicants in Texas. Part II. Accepted and nonaccepted applicants: personality traits. The Advisor 4(2):2–12, 1984.
3. Whiteside R, Murray HD, Lagowski JM, et al: Profile of the 1981 and 1982 medical school applicants in Texas. Part III. Accepted and nonaccepted applicants: self-perceptions of sixteen skills and abilities. The Advisor 5(2):3–12, 1985.
4. Lagowski JM, Whiteside R, Murray HD, et al: Profile of the 1981 and 1982 medical school applicants in Texas. Part IV. Accepted and nonaccepted applicants: motivational influences, extracurricular involvement, and work experience. The Advisor 6(1):1–8, 1985.

How much ethanol?

I found Drs Binder and Postma's article on "Ethylene Glycol Intoxication" (*Texas Medicine*, November, 82:33–35, 1986) interesting and informative. I became a bit confused on the treatment recommendations given in the next to last paragraph on page 35. The recommendations call for a loading dose of 10% ethanol in D_5W, followed by (1:1 mixture of D_5W and absolute alcohol), which represents a considerably stronger mix if I'm not mistaken. Was a "9:1" mixture intended, since I doubt if 10 cc/kg of a 50% mixture of ethanol in 30 minutes would be appreciated by the vascular endothelium or the CNS.

Normally, the reference (9) could be checked to verify the dosage, but the reference provided does not appear to be easily attained.

This is a very useful article and I hope *Texas Medicine* continues to publish this type of handy emergency medicine information.

THOMAS G. BETZ, MD
Chief, Bureau of Communicable Disease Services, Texas Department of Health, 1100 W 49th St, Austin, TX 78756.

The author responds

We thank Dr Betz for his interest in our article, and for detecting a misinterpretation on our part of the therapeutic recommendations cited. Poisendex (1) recommends "Replacing 100 cc of fluid from 1 liter of D_5W with 100 cc of absolute alcohol" to achieve a 10% ethanol solution. This effectively results in the 9:1 dilution of absolute ethanol noted by Dr Betz.

We sincerely regret the error.

Louis S. Binder, MD
Assistant Professor, Division of Trauma and Emergency Medicine, Texas Tech University, 4800 Alberta Ave, El Paso, TX 79905.

REFERENCES

1. Duffy JP: Overview: Glycols. Poisendex, Rocky Mountain Poison Center, Denver, Colo.

SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

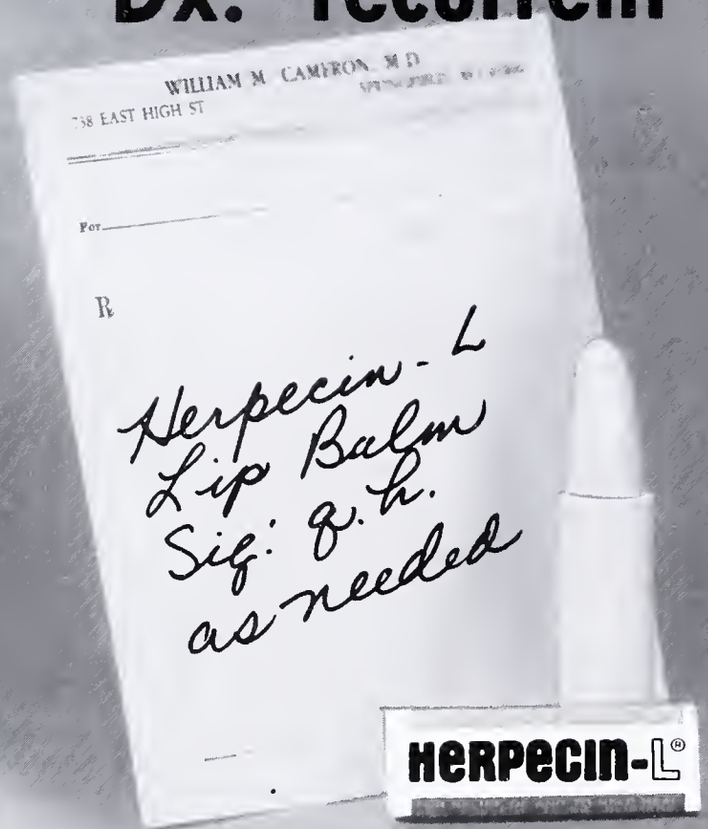
The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA - SUBCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

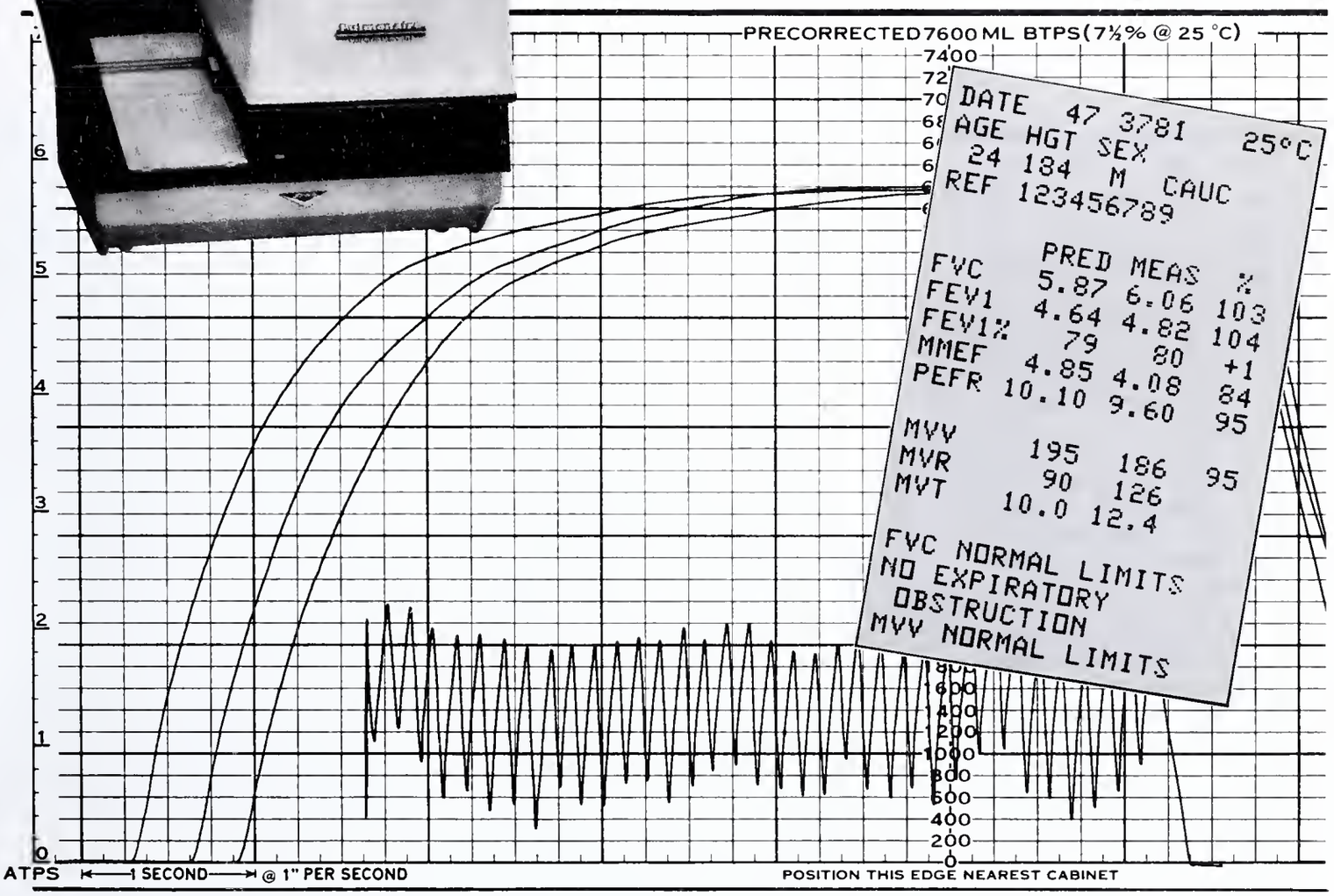
In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

NEW COMPACT 10-LITER SPIROMETER

DATAMITE V®

by Jones Medical, *since 1919*

FVL, FVC, MVV, POST-DB, INTERPRETATION



IN LESS THAN FIVE MINUTES YOU HAVE A COMPLETE, LEGALLY ACCEPTABLE, GRAPHIC AND COMPUTERIZED RECORD

- Easy pour-in, pour-out sterilization
- Volume displacement accuracy
- 5-year bellows warranty
- Easily portable
- Meets ATS, ACCP, NIOSH requirements

FOR OFFICE

- Best test documentation
- Selectable interpretation predicters & parameters
- 35 patient memory option

FOR INDUSTRY

- 200 patient built-in memory option
- OSHA acceptability prompts
- Automatic calibration feature

ONLY **$3,995** LEASE/PURCHASE TERMS AVAILABLE AS LOW AS **$110** PER MO.

FREE DEMONSTRATION IN YOUR OFFICE

Conveniently and immediately available to you from

METRO
654-4700

IN FORT WORTH
CALL 817/877-4600

IN HOUSTON,
CALL 713/370-3859

OR CALL TOLL FREE
1/800/323-7336

Western Medical Corp.

TMA IN ACTION

AMA delegates consider improvements in Medicare

During a session that devoted considerable attention to the Medicare program, the House of Delegates of the American Medical Association asked the association to take legal steps to halt implementation of the Medicare Part B provisions of the Omnibus Budget Reconciliation Act of 1986. The act replaces the freeze on charges of nonparticipating physicians with a complex system of charge limitations.

The delegates met Dec 7–10, 1986, in Las Vegas, where they addressed five other issues related to the Medicare program: professional review activities, extension of the diagnosis-related groups (DRG) system to include physician services, regulations governing rural hospitals and physicians, and mandatory assignment for laboratory procedures performed in physicians' offices.

Among numerous actions related to peer review, the AMA delegates:

1. Recommended that the association draft federal legislation providing that a peer review organization (PRO) may not notify a beneficiary of a PRO determination that the quality of medical services provided does not meet professionally recognized standards of health care until the cited physician has exhausted all appeals.

2. Asked the AMA Board of Trustees to consider undertaking appropriate legal action to assure that physicians are accorded due process appeal rights to judicial review of any adverse decisions.

3. Asked the AMA Board of Trustees to seek revision of regulations that require PROs to automatically deny the second admission of a patient to the same hospital. The request supports case-by-case review of second admissions, with attention to the degree of complication and the nature of each readmission.

The delegates also approved a report that the Board of Trustees has developed a proposed amendment to the Social Security Act to allow physicians the right to judicial review before any PRO sanctions can be imposed upon them.

TMA representatives at the meeting took immediate action when the House of Delegates voted to oppose a proposal to combine reimbursement for hospital and physician inpatient services into a single DRG payment. Texas delegates phoned Sen Phil Gramm (R-College Station) and Republican congressmen to ask that they notify the White House that they oppose the proposal, which came from the federal Office of Management and Budget.

In another action related to Medicare and Medicaid laws, regulations, and requirements, the delegates asked the AMA Board of Trustees to take the lead in effecting changes that will reflect more realistically upon the capacity of hospitals and physicians in rural and isolated areas to provide medical and health care services to the elderly, the poor, and residents of those geographical regions.

The delegates also agreed to ask Congress to repeal the Medicare requirement that physicians accept assignment for laboratory procedures performed in their offices.

Turning to other topics, the House of Delegates voiced its strong support for a strategic plan developed by the Board of Trustees for strengthening public and professional confidence. They also adopted a resolution from the Texas and Missouri delegations, which asked the AMA to increase dissemination of accurate scientific information to the public.

Joseph T. Ainsworth, MD, Houston, addresses the AMA House of Delegates. Dr Ainsworth received the Dr Benjamin Rush Award for outstanding citizenship and public service during the delegates' interim meeting.

AMA honors ten Texans during interim meeting

The American Medical Association honored ten Texans during the interim meeting of the AMA House of Delegates, Dec 7–10, 1986, in Las Vegas.

Joseph T. Ainsworth, MD, Houston, received the association's Dr Benjamin Rush Award for outstanding citizenship and public service. The award, a $2,500 stipend and a commemorative plaque, is named for the Revolutionary War-era physician and patriot.

Dr Ainsworth is vice-president of patient care at The University of Texas Cancer System, M.D. Anderson Hospital and Tumor Institute, Houston. During the past 25 years, he has helped to guide the Houston Livestock Show and Rodeo to become the largest charity event in the city. Dr Ainsworth has served as its president for the past two years. Proceeds from the show have enabled thousands of Texas students to attend college and pursue a wide range of agricultural careers.

The House of Delegates also honored the Texas delegation for recruiting the largest number of new AMA members among large state associations. The delegation recruited 88 new members to receive the Physician Outreach Award.

Eight Texas physicians received blazers with Outreach Emblems for recruiting eight or more members during the year: Max C. Butler, MD, Houston; Milton V. Davis, MD, Kaufman; Ted H. Forsythe, MD, Lubbock; Hugh Lamensdorf, MD, Fort Worth; Sam A. Nixon, MD, Houston; Mario E. Ramirez, MD, Rio Grande City; Betty P. Stephenson, MD, Houston; and James R. Winn, MD, Uvalde.

Finally, Randy Eckert, MD, Austin, was selected chairman-elect of the AMA Resident Physicians Section. Dr Eckert will assume the office of chairman at the AMA's Annual Meeting in June 1987.

Philip R. Overton, LLB, dies following long illness

Attorney Philip R. Overton, 78, who served as Texas Medical Association's general counsel for 37 years, died in an Austin, Tex, hospital Jan 3, 1987, following a long illness.

Mr Overton worked with TMA from 1939 through 1976. He also was general counsel for the Texas Hospital Association and Blue Cross-Blue Shield of Texas. Widely known for his contributions to health law, he was a primary author of the Sanitary Code, the Medical Practice Act, the Texas Tuberculosis Code, the Mental Health Code, the original Narcotic Act and amendments, and the Dangerous Drug Act.

A native Texan, Mr Overton was the son of the late pioneer Lubbock physician Dr M.C. Overton. He attended the Texas Military Academy and received his LLB degree from Jefferson University School of Law in 1931. He was admitted to the Texas Bar in 1932 and served as assistant attorney general of Texas from 1937 to 1939.

TMA honored Mr Overton with the Special Award for Distinguished Service in 1977, and the American Medical Association awarded him the Citation of a Layman for Distinguished Service in 1986. He was a member of the county, state, and national bar associations, and he became a life fellow of the Texas Bar Foundation in 1971. He also was an honorary member of the Southern Medical Association, an honorary life member of the Texas Hospital Association, and an affiliate member of the American Medical Association. For many years he served as a member of the board of directors of the Texas Tuberculosis Association and the American Cancer Society, Texas Division.

After his retirement, Mr Overton continued to advise and counsel TMA's leadership and a host of individual physicians. He also served as general counsel to the Texas Medical Foundation and as a member of the board of directors of the Texas Tech Medical Foundation.

"Phil Overton was a dedicated supporter of the medical profession," said John M. Smith, Jr, MD, San Antonio, a past president of TMA and a close personal friend of Mr Overton. "No one had more influence and input into health care legislation and public policy than Phil. He was always available to physicians who needed legal advice. They could call him at any hour of the day or night. He was an invaluable source of comfort to the physicians of Texas, often not thinking of submitting bills for services rendered," Dr Smith added.

"He was particularly valuable in legislative affairs, both statewide and nationally, because he was personally acquainted with many of the lawmakers . . . . He was a personal friend of theirs at every level as they progressed up the political ladder."

C. Lincoln Williston, former TMA executive director, observed, "Phil Overton had well earned recognition as a pioneer and an eminent authority in medicine and the law. The physicians of Texas and those of us who worked with him will remember him for his dedication to the medical profession, his integrity, his stand for principle, and his commitment to quality medical care for the people of our state."

Mr Overton was married to Marietta Bass, who died in 1977. His survivors include his son Philip M. Overton, MD, an orthopedic surgeon in Austin; granddaughter Hanne-Lise Overton, Austin; brother Marvin Overton, Jr, MD, Amarillo; sisters Ruth Carlock and Nan West, both of Lubbock; and numerous nieces and nephews.

Philip R. Overton, LLB, 78, TMA's former general counsel, died Jan 3, 1987.

Memorial contributions may be made to the Philip R. Overton Annual Lectureship in Medicine and the Law, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

TMA's Board of Trustees established the lectureship in 1986 as a tribute to Mr Overton's years of assisting the medical profession and promoting quality medical care for Texans. The lectureship will be presented each year at the association's annual session or fall or winter conference by a leading authority on the legal aspects of medicine or health care legislation.

Houston hospitality will shine for annual session, May 13–17

Texas Medical Association's 120th Annual Session will be held May 13–17, 1987, in Texas' largest city, which is famous for its vitality and hospitality—Houston.

The Albert Thomas Convention and Exhibit Center will be the focal point for meetings and exhibits. Headquarters hotels will be the Hyatt Regency, business sessions; the Four Seasons, TMA Auxiliary activities; and the Doubletree Hotel (formerly the Meridien) and The Whitehall, general housing and meetings.

Coordinators have developed programs of interest for all specialties. Some 50 out-of-state guest speakers will participate, as well as more than 300 TMA member speakers. The Houston session will cover socioeconomic and technological aspects of medicine, in addition to clinical topics. Areas of discussion include the effects of violence on children, the prevention of osteoporosis, diagnosis and treatment of pulmonary infections, the management of menopause and breast cancer, evaluation of the geriatric patient, and many other important topics addressing today's physician and patient needs.

John J. Coury, Jr, MD, president of the American Medical Association, will explore "Challenges of American Medicine" in his Friday, May 15, General Meeting Luncheon address at the convention center. Dr Coury has been active in both the

IT'S ALL THE COVERAGE THAT YOU WILL EVER NEED!

NEW BENEFITS

$ ***COST OF LIVING GUARDIAN***
This optional benefit provides a schedule that increases monthly claim payments for total or partial disability to cope with inflation.

$ ***INCREASING PRE-DISABILITY BASE EARNINGS***
Automatically increases base amount on each anniversary of partial disability to prevent erosion of claim payments should earnings while partially disabled increase due to inflation.

$ ***WAITING PERIOD FOR PARTIAL DISABILITY***
The waiting period for partial disability is now the same as the waiting period you select for total disability, 30, 90 or 180 days.

$ ***PARTIAL DISABILITY BENEFITS***
Benefits becoming due are payable at 50 percent of your monthly benefit for total disability until the long term payment schedule applies at the seventh month.

$ ***INNOVATIVE SOCIAL "SUBSTITUTE"***
A $1000 monthly benefit is available under TMA's low cost, 180 day waiting period to members who want insurance payment as a substitute if a disability does not qualify for Social Security disability payments. The $1000 is payable even if payments are made by Social Security.

"THE TRIED AND TRUE"

$ Bonafide long term benefit periods for total disability, to age 70.

$ Long term benefits for partial disability, at no additional cost.

$ Definition of disability protects you at your medical specialty, at no additional cost.

$ You may be insured for the maximum monthly benefit, up to $8000, regardless of other disability insurance you have in force.

$ At time of claim, the full TMA monthly benefit is paid regardless of monies you may receive from other disability policies, salary continuation, investments, Social Security.

Refer to the "Center Section" of the TMA Insurance Brochure dated August, 1986 for examples. If you do not have a brochure, call 1-800 252-9318.

TEXAS MEDICAL ASSOCIATION INSURANCE PROGRAM
1901 NORTH LAMAR BLVD • AUSTIN, TEXAS 78705
underwritten by
PRUCO LIFE INSURANCE COMPANY of TEXAS
a subsidiary of the PRUDENTIAL

AMA and the Michigan State Medical Society. He currently serves as chairman of the Council of the World Medical Association.

Astronaut Rhea Seddon, MD, Houston, will share her experience in space and discuss the National Aeronautics and Space Administration's future during the Saturday, May 16, General Meeting Luncheon. A member of the shuttle *Discovery* crew in 1985, Dr Seddon was responsible for the deployment of the LEASAT satellite, remote manipulator system operations, and the American flight echocardiograph experiment.

In addition to an excellent scientific program, several exciting entertainment events are planned for the annual session.

The Four Freshmen will perform at the TMA/TMAA social event Friday evening, May 15, in the Imperial Ballroom of the Hyatt Regency Hotel. Known as one of the "most exciting musical acts in show business" and as "America's number one vocal and instrumental quartet," the group offers vast versatility. The Bo-Jangles Band, a popular dance orchestra, and comedian Gary Bun Richardson also will perform at the event, which begins at 8 pm and continues until 1 am.

Also scheduled during the session are a fun run, tennis and golf tournaments, and auxiliary/spouse programs.

Further information on the annual session is available from Dale Willimack, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

TMA, THA to sponsor medical staff conference

The Texas Medical Association, in cooperation with the Texas Hospital Association, will present a three-day conference designed to help physicians become more efficient and effective members of hospital medical staffs.

Recognized leaders from the American Medical Association, American Hospital Association, Texas Medical Association, Texas Hospital Association, and the Texas legislature will provide presentations and lead discussions. Their topics include: hospitals of today; legislative and government interest in health care delivery; leadership, management, and communication styles; and effective and efficient communication needs and skills in the hospital setting.

Other program topics are: making the most of your time and efforts on hospital committees; the environment of medicine and need for understanding; how to handle the problem physician on the medical staff; government actions and critical court cases impacting medical staff responsibilities and privileges; trending, utilization review, and quality assurance studies; and the future for hospitals and medical staffs.

The conference will be held at the Marriott on the Riverwalk in San Antonio, beginning at 2:30 pm, Friday, April 3, and concluding at noon on Sunday, April 5. Registration fee is $200. Look for further information, including registration and housing information, that will be mailed directly to each TMA member, or call John Boff or Susan Reed at (512)477–6704, ext 260.

Catalog is handy guide to TMA's audiovisual collection

The *Audiovisuals Catalog* and its *1986 Supplement* are handy guides to the audiovisual collection in Texas Medical Association's Memorial Library.

The guide lists more than 300 titles on videotape, most of them on half-inch VHS cassettes. There also are more than 200 motion picture films, nearly 300 slide sets, and 14 audiojournals.

TMA members use these resources in varied ways, according to Audiovisual Coordinator Carolyn Thompson. Physicians who spend a lot of time on the road listen to the audiotapes in their cars. Others listen to them while jogging or riding an exercise bike. They use the films to introduce a topic at a health education program and as a catalyst to discussion. The list of films covers a wide range of topics for all ages, so the slide sets are useful for teaching and independent study and for illustrating presentations the physician has prepared.

The growing collection of videotapes offers a quick way to review a topic or stay abreast of developments outside one's own specialty, Ms Thompson says. The videocassettes are easy to use and can be a valuable addition to a patient education program.

For a copy of the *Audiovisuals Catalog* and the *1986 Supplement*, write the Audiovisual Coordinator, TMA Memorial Library, 1801 N Lamar Blvd, Austin, TX 78701, or call (512)477–6704, ext 195.

Some of the new titles in the audiovisual collection are listed in the "Medicine in Literature" section, page 82 of this issue of *Texas Medicine*.

Correction

An error appeared in "Precautions for health care workers in the care of AIDS patients," published in the December 1986 issue of *Texas Medicine*. The sentence beginning on line 12 of page 29 incorrectly stated: "Pregnant health care workers are now known to be at greater risk of contracting HTLV III/LAV infection than are other health care workers." The sentence should have stated that pregnant health care workers are *not* known to be at increased risk.

HEALTH LINE

AMA conference to focus on AIDS strategies

An American Medical Association conference next spring will offer guidance in developing community strategies to confront acquired immune deficiency syndrome (AIDS).

Scheduled for April 21–22, 1987, at the Downtown Chicago Marriott, "AIDS and Public Policy: A Community Response" is designed for physicians, medical society executives, and civic leaders. The program will address medical, social, economic, and psychological issues.

Further information on the conference is available from Robert Rinaldi, PhD, Project Coordinator on AIDS, 535 N Dearborn St, Chicago, IL 60610, phone (312)645–5076.

SOCIOECONOMICS

TSBME calls for CME as requirement for relicensure

In response to pressure from legislators who have critieized the operations of the Texas State Board of Medical Examiners, the board has agreed unanimously that physicians should be required to complete 150 credit hours of continuing medical education in order to renew their licenses.

At press time, the board announced that the proposal would be presented to the 70th Texas Legislature, which convened in January. The board also agreed to recommend mandatory reporting of disciplinary actions involving physicians, with immunity to physicians and others who report.

G.V. Brindley, Jr, MD, executive direetor of the state board, said that he expects the board to facilitate compliance with the CME requirement. "The physieian in Muleshoe should be able to meet the requirement by reading and listening to tapes," he said.

The board reeently has added a question to licensure forms, asking if a physieian uses some form of continuing education. Any physician who does not receives information on the value and availability of CME, Dr Brindley said.

Texas Medical Association long has advocated voluntary continuing medical education and opposed mandatory CME. The eurrent association poliey states, "Life-long continuing education for all physieians is a necessary goal. Individual physicians should pursue self-directed learning opportunities through a broad spectrum of continuing edueation means. The Texas Medical Association supports voluntary continuing edueation and opposes mandatory continuing edueation as a basis for TMA membership or state relicensure. The development of high quality continuing medical education through accredited programs in Texas hospitals and institutions is a high priority."

According to Dr Brindley, "There is no index that proves that continuing medical education is related to competency, but it is true that physicians ought to do that much (150 hours each three years) anyway."

680,030 Texans eligible for benefits from CHAMPUS

The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) eovers 680,030 residents of Texas, reflecting "the importanee of CHAMPUS as a provider of medical and hospital care," according to a report to Texas Medical Association's Board of Trustees.

Civilian physicians in this state provided eare to 71,441 CHAMPUS beneficiaries in fiscal year 1985, the report says. During that same year, the federal government estimates that health care for CHAMPUS beneficiaries in the state cost more than $85 million.

CHAMPUS underwrites care delivered by physieians and other civilian health providers to retired members and dependents of active and retired members of the seven uniformed services, the commissioned corps of the Public Health Service, the Coast Guard, and the National Oeeanic and Atmospheric Administration.

Individuals who were covered by the program in Texas in 1984, the latest year for which statistics are available, included 131,310 on active duty; 184,643 dependents of those on active duty; 137,892 retired; 205,134 dependents of those who are retired; and 21,051 survivors of those in the armed forces.

CAPITAL COMMENTS

News Hotline updates callers on status of medical legislation

Texas Medical Association's News Hotline updates callers on the status of medical legislation under consideration by the 70th Texas Legislature. The toll-free number is 1–800–252–7003. Physicians in Austin may call 479–7894.

Information on the hotline tape is updated daily, Monday through Friday, at 10 am.

Public Affairs Division analyzes political makeup of legislature

As *Texas Medicine* went to press before the opening of the 70th Texas Legislature, Texas Medical Association's Division of Public Affairs was analyzing the political makeup of the House of Representatives and the Senate.

The November general elections continued a trend toward re-electing incumbents. The elections produeed only 25 new House members and six new Senate members. The new Senate members came from eleetions that did not involve incumbents. In the House, newcomers unseated six incumbents, most often in victories associated with personalities or local issues. The Texas Medieal Politieal Action Committee (TEXPAC) participated in 75 elections, winning 73.

The partisan makeup of the solons showed virtually no change. The House gained one Republican, bringing the number of Republicans to 56. The Senate showed no partisan shift, with only six Republican members. In the view of the Division of Public Affairs staff, the House shows a moderate philosophical shift to the right, and may tend to vote along more conservative lines during the 1987 session. Although the Senate moved "ever so slightly leftward," the staff predicts that the Senate will maintain a middle-of-the-road posture in most controversial issues. The most important variables in the Senate voting patterns are the perceived vulnerabilities of certain key state Senators facing reelection in two years.

A report from the public affairs staff observed, "Partisan makeup in the House beeomes increasingly important as Republicans will now have an incumbent governor and a tendency to block vote on fiscal issues. The inereasingly partisan nature of the House further complicates the legislature's ability to cope with a projected $4.6 billion revenue shortfall, and intensifies debate on the need for additional revenue (tax) measures."

"As Governor, I'm extremely concerned . . . when some physicians in the state cannot obtain insurance, they simply cannot afford to continue practice. When some physicians who are qualified to practice a full range of medical care are being forced to give up some procedures in order to receive insurance coverage, it reduces the available medical manpower. When some physicians in Texas are having their rates increased 600% in a short time span, it compounds the problem of rising health care costs, and I, as Governor, am concerned with this cost to the patients."

The Honorable Dolph Briscoe, Governor of Texas, in 1975 address to the TMA House of Delegates.

Like the war to end all wars, Governor Briscoe's appointment in 1975 of what came to be known as the Keeton Commission (after University of Texas Law School Dean Page Keeton, who chaired the commission) was to recommend changes in Texas' malpractice and insurance laws that would alleviate a serious crunch in the cost and availability of medical professional liability insurance. The 1977 legislature passed a controversial package of tort and insurance-related reforms to solve a crisis that almost precisely mirrors the 1987 crisis. But, in a painfully familiar cycle reminiscent of 1977, Texas physicians are once again finding professional liability insurance unavailable or unaffordable, unless they limit or eliminate certain kinds of medical care from their practices, with a subsequent threat to the quality of and access to that care by their patients. Needless to say, the current legislature will want to know why, ten years after the enactment of the Medical Professional Liability Insurance Improvement Act of 1977, we again are facing a crisis. This supplement to *Texas Medicine* documents the significant problems physicians have in delivering care to their patients, and suggests several legislative remedies that, if carefully constructed, can avoid another episodic liability crunch.

Texas' current liability crisis in many respects mirrors the crisis of 1975–1977. Physicians are radically altering their practices, with the predictably adverse effect on patient care. However, it is significantly different in one fundamental way: Texas' physicians are not alone in experiencing the severe problems generated by this crisis. The increasing cost and decreasing availability of liability insurance has touched large and small businesses, all kinds of professionals, municipalities, even the Boy Scouts.

Where insurance is available (and in some areas it is not), liability premium increases of 100% over the last two years have become commonplace.

The causes of the crisis are extensive and deeply rooted in a system that no longer acknowledges fault:

1. **Changing rules.** The courts have emasculated or undermined virtually every tort reform enacted in 1977. They have acted like a legislative body, changing the rules of recovery through a variety of procedural and substantive practices and doctrines. The courts have shifted liability to "deep pocket" defendants who either did not cause the underlying injury or had only a limited or tangential involvement.

2. **More claims.** This crisis follows yet another explosion in the incidence and severity of malpractice claims against physicians. The physicians most likely to be sued are among the most highly trained and skilled.

3. **Systemic inefficiencies.** Texas' damage recovery system continues to allocate a disproportionate share of every dollar paid through the system to attorneys' fees and litigation and administrative expenses, with too little going to the injured plaintiff.

If the 70th Texas Legislature is to improve the liability climate, it needs to take action in four areas. In addition to approving tort reforms, it will be necessary to address issues related to risk management, insurance, and judicial review.

Negligent acts that result in injury are to some extent preventable through risk management. The professions, such as in health or law; businesses; and local governments will have to address measures to minimize the possibility of negligence. In that regard, TMA will seek legislation to improve and strengthen the peer review process. Undoubtedly, the legal profession will have to respond to "frivolous suit" legislation.

The legislature will closely scrutinize the liability insurance industry's response to macroeconomic trends, as well as its reserving practices and rate structures.

And, for the first time in modern Texas political history, the legislature seriously will consider modifying the judicial elective process. Recent legislative hearings have added momentum to proposals that would eliminate partisan elections of judges at the appellate level and institute either an appointed merit selection or a merit appointment with nonpartisan reelection cycles.

In developing a case for tort reform, the Texas Medical Association has conducted independent scientific research to (1) accurately measure the physician and patient care impacts of Texas' liability crisis, and compare

those results with historical research and current scientific literature, and (2) through a national economic research firm, determine with some reasonable certainty, the optimal mix of specific reforms, which, if passed, would have the desired result of increasing the affordability and availability of liability insurance, as well as reinstituting fairness and predictability into the tort system.

Until recently, only three studies had attempted to measure the effects of the mid-1970's tort and insurance reforms. Now, however, there is a growing body of new scientific evidence on malpractice claims and their economic relationships to tort reforms, which strongly suggest that carefully crafted legislation can affect the incidence and severity of malpractice claims and, more importantly, generate insurance market responses that stabilize costs and increase the availability of coverage.

Two new studies, one by Patricia Danzon, through the Rand Corporation, and the other—still ongoing—by Texas Medical Association's economic research consultant, RRC, Inc, measure roughly ten years' worth of claims information and related insurance data. The results clearly suggest a measurable relationship between changes in tort laws and the incidence and severity of claims. (The RRC study and highlights of the Rand study will be reported in a subsequent issue of *Texas Medicine.*)

Medicine's case for reform is compelling. Much like the crisis in 1975, the most competent and highly skilled physicians are the ones sued most often. As in 1975, it is the patient who bears the brunt of this vicious cycle as more and more competent doctors leave practice, retire early, or discontinue the most basic medical services—like delivering babies. The legislature and all participants in the tort system must learn from the mistakes of the past, or be doomed to repeat them.

Public Opinion: Fix The System

Although tort reform is a somewhat esoteric concept, a statewide survey conducted this summer indicated a surprisingly large public grasp of the issue and widespread support for legislative reforms. When public respondents were asked if they had heard a lot, just a little, or nothing at all about a "nationwide liability crisis because lawsuits and insurance costs are increasing," almost 57% had heard a lot; 30%, a little; and only 13%, nothing. More importantly, when the respondents were asked, "Do you think the liability issue is a serious one which calls for major changes in the amount of damages awarded in law suits, or do you think the liability issue has been exaggerated by insurance companies and no major changes are needed," almost 70% said change is needed. Equally encouraging, only 17.8% said no change is needed in the system.

Documenting The Crisis: A Survey of Texas' Primary Care Physicians

In the summer of 1986 the Texas Medical Association constructed a survey questionnaire to measure the impact of professional liability insurance rates on physicians and their patients in Texas. Many of the questions are direct replications from surveys in 1975, 1976, and 1985. TMA mailed the 1986 survey form to a random sample of 4,000 active members involved in direct patient care. Opinion Analysts, Inc, an independent research firm in Austin, collected and analyzed the responses. The survey results insure a 95% confidence rating. That is, we are 95% certain that the response will not vary more than four percentage points positive or negative from the response rate reported if the entire population actually were interviewed.

The results of this survey are dramatic, and they document an alarming trend toward increased barriers to care, particularly among those who have few alternatives, or none, when they are sick:

Access to care is being seriously jeopardized, particularly among indigents and in rural areas. The impact of escalating professional liability insurance rates and the incidences of lawsuits is felt most dramatically in the area of indigent patient care. Twenty-two percent of those physicians who have been sued have had claims filed against them by indigent patients not under their continuing care. As a consequence of that experience—first- or second-hand—15% of Texas physicians have limited their service to indigent patients "a great deal"; 16%, "some"; and 9%, by "just a little." The cumulative impact is that the availability of care is reduced by more than 40%. Perhaps even more revealing is that 45% of these physicians say that some degree of charitable immunity would increase their availability to treat these indigent patients. The numbers in Figure 1 show the serious impact on indigent health care by specialty and make it clear that the greatest impact is felt in the area of childbearing. Given the limited or total absence of proper prenatal care afforded these indigent mothers, it is no surprise that they suffer the greatest risk of a bad outcome. Statistically, they also are the patients most likely to sue a physician, irrespective of negligence. Note that 54% of the obstetricians and gynecologists surveyed have limited to some extent their services to indigent patients.

Specialty Designations

AN	**Anesthesiology**
FP/GP	**Family Practice/General Practice**
IM	**Internal Medicine**
NS	**Neurological Surgery**
OBG	**Obstetrics and Gynecology**
OPH	**Ophthalmology**
ORS	**Orthopedic Surgery**
OSur	**Other Surgery**
PD	**Pediatrics**

1. Limitation of care to indigent patients.

	Proportion of Patients Indigent	Sued By+ Indigent Patients	Ltd Service-Indigent Patients: A Great Deal	Some	Just A Little	Not At All
All	10%	22%	15%	16%	9%	50%
AN	10%	28%	7%	18%	5%	62%
FP/GP	13%	23%	19%	19%	11%	44%
IM	9%	17%	15%	10%	9%	51%
NS	11%	34%	18%	25%	12%	43%
OBG	10%	25%	35%	14%	5%	38%
ORS	8%	15%	22%	21%	14%	40%
OSur	9%	27%	19%	27%	11%	40%
PD	11%	34%	14%	14%	10%	47%

(+ Of those who have been sued during their professional careers.)

Care is being limited across all primary care specialties. We asked respondents if the cost of professional liability insurance has caused them to eliminate or limit the procedures they perform in their practices. (Fig 2.) Thirty-three percent of Texas doctors say they have limited or eliminated some procedures because of the cost of insurance. The greatest impacts are felt in family and general medicine, with 69% of physicians in those specialties citing at least some limitations. By far the most dramatic figure is the sad fact that 37% of Texas' family and general practitioners have eliminated obstetrics from their practices, while another 11% have limited those procedures. In fact, family physicians lead each specific category, and there are portions who have limited or eliminated procedures. Their understandable reluctance to provide care directly impacts on public health, and makes these statistics the most compelling argument for a legislative response this session.

2. Limitation of procedures due to cost of insurance.

	Some Limited	Anesthesia Elim	Anesthesia Limit	Emergency Elim	Emergency Limit	Obstetrics Elim	Obstetrics Limit	Surgery Elim	Surgery Limit
All	33%	5%	4%	2%	12%	9%	4%	6%	14%
AN	23%	1%	11%	—	5%	5%	4%	1%	2%
FP/GP	69%	15%	5%	4%	26%	37%	11%	24%	30%
IM	13%	1%	1%	1%	6%	—	—	1%	—
NS	33%	3%	—	1%	11%	1%	—	1%	21%
OBG	47%	7%	16%	2%	17%	14%	21%	2%	11%
OPH	46%	2%	13%	3%	21%	—	—	6%	33%
ORS	33%	2%	2%	2%	17%	—	—	3%	30%
OSur	39%	2%	5%	2%	20%	3%	—	3%	28%

Physicians are practicing defensive medicine. Respondents were asked if they ordered more lab tests and X-rays, sought consultation more frequently, or hospitalized more patients because of a threat of a malpractice suit. Figure 3 illustrates that in each of four specific areas of defensive medicine, at least half of the respondents indicate that they always or sometimes go to extra lengths to protect themselves against lawsuits. These procedures do not add to the body of medical knowledge needed to treat a patient. They document the physician's medical judgement when a jury views the doctor with the benefit of hindsight and second-guesses that judgement.

3. Increased procedures due to fear of malpractice suit.

	More Lab Tests Always	More Lab Tests Sometimes	More X-Rays Always	More X-Rays Sometimes	More Consults Always	More Consults Sometimes	More Hospitalization Always	More Hospitalization Sometimes
All	25%	52%	25%	51%	30%	51%	13%	39%
AN	33%	42%	26%	35%	29%	48%	13%	11%
FP/GP	31%	58%	33%	57%	38%	53%	15%	53%
IM	27%	54%	27%	56%	29%	53%	16%	45%
NS	46%	42%	50%	40%	40%	47%	31%	44%
OBG	42%	51%	34%	54%	44%	8%	22%	51%
OPH	14%	54%	14%	57%	37%	51%	3%	27%
ORS	22%	59%	33%	57%	29%	67%	14%	51%
OSur	32%	53%	32%	56%	36%	51%	20%	49%
PD	10%	54%	8%	69%	13%	67%	5%	38%

Everyone pays for the cost of insurance. We asked the respondents if they have raised their medical fees during the past two years due to the cost of insurance, and if so, by what proportion. We also asked what proportion of an average patient's bill is attributable to defensive medicine. TMA's study found that Texas physicians have raised their fees by an average of more than 4½% over the past two years solely due to the increased cost of professional liability insurance. At the same time, they estimate that more than 13½% of their patients' bills can be attributed to the cost of defensive medicine. When asked how they would handle a future increase in liability insurance premiums, most doctors stated they expected to pass that increase through by raising their fees for non-Medicare and non-Medicaid patients. Even so, recent national research by RRC shows an ever-widening gap between physicians' liability coverage and their risk exposure, with subsequent restrictions on practice behavior. Figure 4 shows how most Texas physicians spread the cost of their premium increases.

4. Effect of premium increases.

	Absorb w/out Raising Fees	Raise Fees to Non-MC/MA PTN	Work Longer	Limit Procedure
All	18%	69%	17%	20%
AN	11%	77%	17%	11%
FP/GP	14%	72%	19%	39%
IM	21%	65%	18%	13%
NS	8%	83%	18%	12%
OBG	6%	88%	15%	19%
OPH	21%	68%	19%	24%
ORS	14%	81%	19%	14%
OSur	14%	79%	19%	23%
PD	20%	58%	14%	12%

At a time when it's never been safer to receive medical care, Texas physicians are at their greatest risk of suit. We asked physicians how many professional liability suits or claims have been filed against them during the past 12 months, past 24 months, and during their professional careers. Figure 5 indicates that the incidence rates for suits is 14 per 100 doctors during the past year, 24 per 100 doctors during the past two years, and 79 per 100 doctors during their professional careers. The proportion of physicians with at least one suit during their careers has increased dramatically since 1975, when 28% of Texas primary care physicians reported at least one suit, compared with 46% in 1986.

In yet another manifestation of the system's unfairness, those specialists with the greatest degree of technical training and skill are among the physicians who are sued most often: neurosurgeons, obstetricians/gynecologists, and orthopedic surgeons.

5. Professional liability suits/claims (per 100 physicians).

	During the Past 12 Months	During the Past 24 Months	During Prof'l Career
All	14	24	79
AN	15	26	87
FP/GP	14	27	91
IM	7	13	38
NS	40	60	240
OBG	24	36	125
OPH	6	14	35
ORS	17	40	154
OSur	24	33	127
PD	9	16	42

In conclusion, the results of TMA's survey prove that the crisis is real. It adversely affects care, particularly among those patients with the greatest need—indigent mothers

and patients requiring highly technical or skilled treatment. The dramatic alterations in physician practice behavior and its subsequent effect on patient care are direct and tragic responses to the cost of liability insurance and the very real threat of a suit, irrespective of negligence.

A Physician Survey of Texas' Liability Crisis: Impacts on Indigent Patient Care

by Randy Fritz

Based on a study I recently completed, I am certain that the crisis in medical care is very real, and carefully considered legislative reforms can reverse its negative impacts on the availability of health care (particularly obstetrical care). The tort system often is described as being in a state of "crisis." But the real "liability crisis," at least as it pertains to medical liability, is not soaring premiums or extravagant jury awards. Rather, it is a very real and growing threat to the medical well-being of poor persons and pregnant women and their unborn children.

". . . malpractice laws and . . . insurance rates are causing substantial societal harm."

The results of my 1985 study of the impact of professional liability on the medical practices of Texas physicians closely parallel those of TMA's 1986 study, and they prove that the threat exists. During November 1985, I surveyed a randomly-selected group of 1,000 licensed Texas doctors concerning the way they perceive the costs and risks of medical professional liability, and the way in which those perceptions are changing their approach to medical care. The results of that study, which are statistically sound in the aggregate and in terms of the most important specialty groups (family practice, obstetrics and gynecology, and general surgery), support the argument that current malpractice laws and, in turn, insurance rates are causing substantial societal harm.

The scope of this article does not permit a full discussion of the survey instrument, or the response rates by specialty, type of practice, or age group. It should be adequate to specify the following statistical characteristics of the final survey results: 45% of all surveys were returned (approximately 13% of those were discarded because they were submitted by non-practicing physicians); 43% of the family doctors responded, as did 47% of the general surgeons and 49% of the obstetricians and gynecologists; the majority of the respondents (53%) had been in medical practice from 20 to 40 years.

To determine whether the malpractice system is harming indigents and poor persons, my survey asked the physicians to respond to the statement, "In light of current medical professional liability concerns, it is better to see fewer indigent and Medicaid patients." Forty-five percent of all physicians, 50% of family doctors, and 55% of obstetricians and gynecologists agreed or strongly agreed with the statement. More than 40% of all physicians who anticipate practicing at least ten more years expressed agreement or strong agreement with the statement. The percentages show that the present malpractice system will reduce access to care for indigent and Medicaid patients. Texas Medical Association's recent survey of primary care physicians reconfirms this dramatic impact; 22% of those physicians who have been sued have had claims filed against them by indigents not under their continuing care.

Perhaps even more revealing is the fact that 45% of those doctors who have been sued say that some degree of charitable immunity would increase their availability to treat indigent patients. Only 23% said it would not. The greatest impact is felt in the area of childbearing: 54% of Texas obstetricians/gynecologists have limited to some extent their services to indigent patients.

". . . an unsuccessful outcome usually means a lawsuit, with or without any negligence."

The probability of being sued—regardless of negligence—by an indigent patient is disproportionate to the total patient population because (1) there is no continuing physician-patient relationship, and (2) indigents are typically in poorer health due to complex economic and sociocultural reasons, and present themselves with more serious and chronic conditions that complicate or prevent a successful treatment. And an unsuccessful outcome usually means a lawsuit, with or without any negligence.

Probably the most important question in the survey was: "If you have eliminated any procedures from your current practice because of professional liability, please specify them." More than 40% of all doctors reported that they had eliminated at least one procedure, usually high-risk, from their practices, and 33% of obstetricians and gynecologists reported the elimination of high-risk obstetrics from their practices. TMA's independent study a year later found equally striking figures—47% of Texas' obstetricians/gynecologists have limited their practices. Sixty-nine percent of the family physicians have limited their practices, and 37% of the family physicians have eliminated obstetrics.

". . . more than 65% of the family physicians said they no longer delivered babies."

My greatest concern was the response of family practitioners, especially those working in small towns or rural areas. If nonurban family doctors were restricting their obstetrical care to a significant degree, the impact on pregnant women, especially poor women who could not afford the expense and inconvenience of urban obstetrical care, would be severe. This concern was well-founded. More than 75% of the responding family doctors said they had cut back on at least one procedure, including 45% who said they no longer performed minor surgery. The most important and disturbing finding, however, was that *more than 65% of the family physicians said they no longer delivered babies.*

The greatest proportion of family physicians who no longer practice obstetrics live in small towns or rural areas. The impact on people living in nonmetropolitan areas is even greater because, according to my study and the Texas Medical Association, only about 15% of obstetricians and gynecologists (the only obstetrical alternative to family doctors) practice outside of metropolitan regions. A pregnant woman living in a large city probably will have an acceptable number of obstetrical choices, even considering the relatively large percentage of family doctors and obstetricians and gynecologists who have

stopped delivering babies. But pregnant women living in isolated rural areas have very limited prenatal/obstetrical options. In those cases, the impact of local doctors refusing to deliver babies because of professional liability concerns could have potentially catastrophic repercussions.

If one accepts the statement that a high percentage of family physicians are giving up obstetrics, is it possible to isolate the forces driving those decisions? Based on these survey results, phone conversations with family physicians, and discussions with medical malpractice underwriters, I have concluded that there are two basic causes for the alarming drop in the availability of prenatal/obstetrical care in Texas' nonurban areas.

". . . poor women are inherently high-risk patients."

The first cause is legal risk. There is no other procedure in family medicine that is as legally risky as obstetrical care. Family physicians who wish to contain their exposure to risk naturally will consider abandoning obstetrics. And, those who decide to continue delivering babies are likely to restrict the availability of their services to paying patients. That decision is not a function of greed or avarice. It is simply a recognition of the fact that poor women are inherently high-risk patients. Poor women are statistically the most likely to suffer birthing abnormalities for a number of reasons, including malnourishment, failure to secure adequate prenatal care, untreated health problems, and diabetes. Physicians wishing to reduce their exposure to suits will have to restrict care to those patients who represent the highest level of legal risk.

The second cause of the decreasing availability of prenatal/obstetrical care is based on the relationship between a physician's income and the way malpractice premiums are figured. A physician's actuarial classification depends on the greatest-risk procedure that he or she practices. Because a disproportionate number of suits result from negative birthing outcomes, obstetrics is classified as a very high-risk procedure, and physicians who deliver babies pay accordingly for their malpractice insurance.

Generally, a family doctor has to deliver only one baby per year to be charged the obstetrical rate. In fact, some underwriters consider family physicians who occasionally deliver babies to be greater overall risks than obstetricians and gynecologists for whom obstetrics is a normal part of their daily routine. In Texas, the average premium for low-risk family physicians in 1985 was about $4,000, while the average premium for obstetrics was just over $12,000. A family doctor who decides to deliver babies has to generate, on average, at least $8,000 in prenatal and obstetrical income just to break even on the higher cost of malpractice insurance.

In a major urban area, the costs of premiums would present an irritating but probably manageable financial problem. But a nonurban family physician who charges lower fees and probably has a higher percentage of nonpaying patients will experience a powerful economic disincentive to deliver babies. And when one considers the intangible costs of maintaining a family obstetrical practice (long hours, calls at 3 am, inadequate hospital emergency resources), it is not surprising that the majority of nonmetropolitan family doctors have concluded that the costs exceed the benefits.

This survey and follow-up interviews with doctors across the state during the past year have convinced me that a significant (and growing) number of physicians are choosing to retaliate against a system that they perceive as unfair and unnecessarily costly.

Randy Fritz is an analyst and legislative aide to Rep Mike Toomey (R-Houston). Fritz is the staff author of the Texas House-Senate Joint Study Committee on Liability Insurance and Tort Law and Procedure report to the legislature, and has written or co-written several legislative reports and studies.

Peer Review and Medical Discipline: Improving the System

A logical consequence of searching for workable solutions to the problem of sharply rising liability insurance premiums is to minimize the risk of injury, euphemistically referred to as "risk management." Toward that end, the legislature will scrutinize the licensed professionals in the tort system—such as attorneys and physicians—whose actions may cause personal injury claims involving negligence.

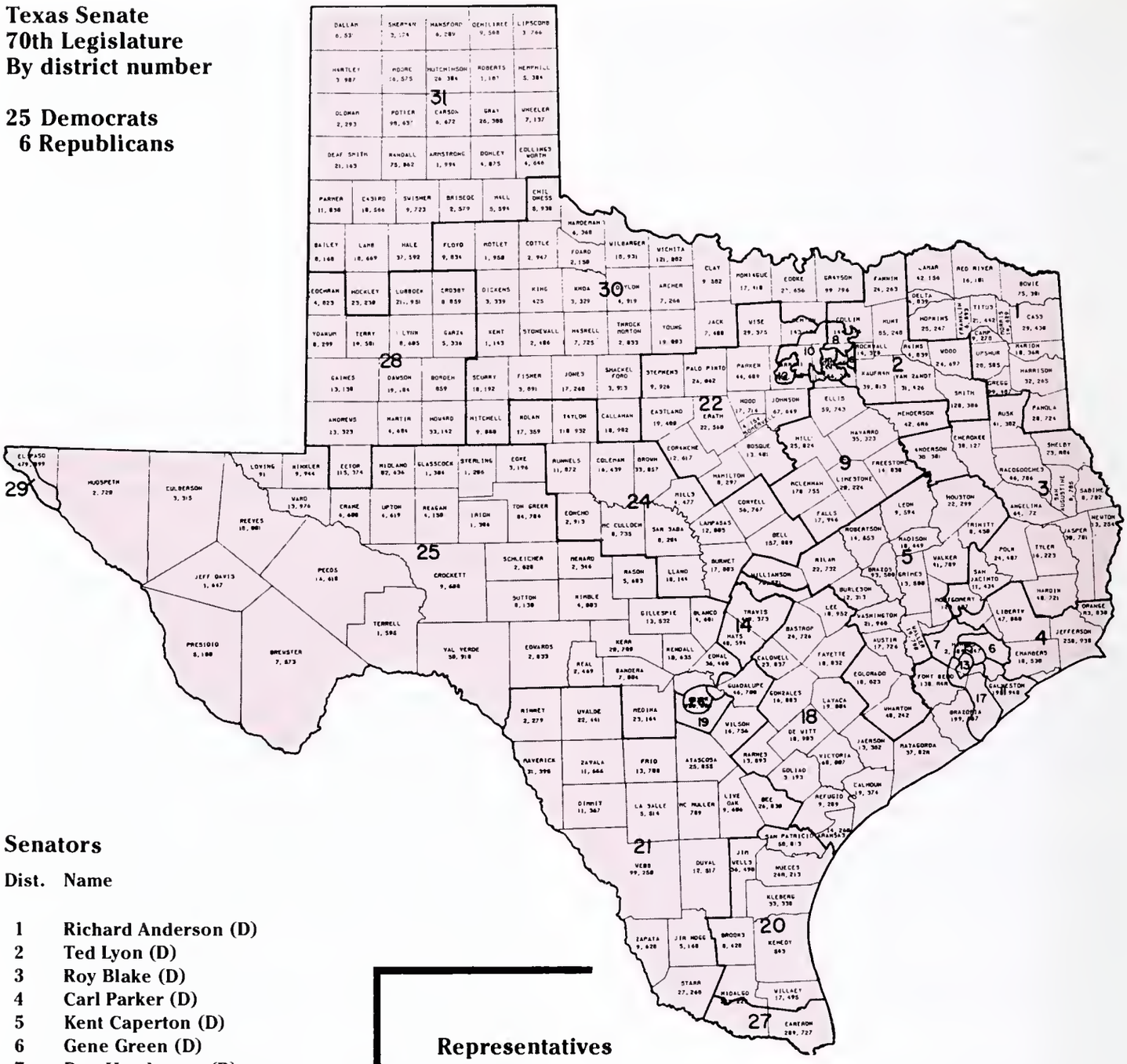
Recent hearings regarding nominees to the Texas State Board of Medical Examiners raised questions regarding the adequacy of governmental and private regulation of the professions. In response to those concerns, the board has made substantial administrative changes that will expedite investigations and the disposition of complaints. The board recently reorganized its investigative staff in order to identify qualitative differences between competency questions and other kinds of complaints. The legislature has funded additional staffing and more frequent meetings that also will expedite the investigative and disciplinary processes. To further enhance its effectiveness, the State Board of Medical Examiners is asking the legislature to provide statutory authority for the board to impose a minimum continuing medical education requirement as a condition of relicensure. The board has suggested a requirement of 150 hours every three years.

At the same time, the Texas Medical Association has asked for greater legal protection of the peer review process in order to ensure closer cooperation between peer review groups and the state board and greater physician participation in the peer review process. In a recent study of primary care physicians, 90% of the respondents rated peer review in their area as "excellent"; 49%, "good"; 19%, "only fair"; and only 6%, "poor." More than 52% of physicians involved in peer review are reluctant to carry on their activities because of the threat of a law suit. This fear frequently has been identified as the largest impediment to aggressive reporting of peer review sanctions to outside entities. Significantly, 52% of the respondents in the TMA study stated that they would be more likely to participate in peer review if there were better protection from retaliatory suits; and 47% stated that if assured immunity, they would be more likely to report a physician to a state board of medical examiners for disciplinary action.

TMA recently completed an extensive study of peer review activities across the state to determine how medical staffs rate their mechanisms and what legislative assistance they might need to help them do their job better. The results of this study are being used in drafting TMA's peer review legislation, and will be summarized in the March 1987 issue of *Texas Medicine*. The association will seek legislation that would provide "absolute immunity" for good faith peer review activities and allow physicians

Texas Senate
70th Legislature
By district number

25 Democrats
6 Republicans



Senators

Dist.	Name
1	Richard Anderson (D)
2	Ted Lyon (D)
3	Roy Blake (D)
4	Carl Parker (D)
5	Kent Caperton (D)
6	Gene Green (D)
7	Don Henderson (R)
8	O. H. "Ike" Harris (R)
9	Chet Edwards (D)
10	Bob McFarland (R)
11	Chet Brooks (D)
12	Hugh Parmer (D)
13	Craig Washington (D)
14	Gonzalo Barrientos (D)
15	John Whitmire (D)
16	John Leedom(R)
17	J. E. "Buster" Brown (R)
18	Kenneth Armbrister(D)
19	Frank Tejeda (D)
20	Carlos Truan (D)
21	Judith Zaffirini (D)
22	Bob Glasgow (D)
23	Eddie Bernice Johnson (D)
24	Grant Jones (D)
25	Bill Sims (D)
26	Cynthia Taylor Krier (R)
27	Hector Uribe (D)
28	John T. Montford (D)
29	H. Tati Santiesteban (D)
30	Ray Farabee (D)
31	Bill Sarpalius (D)

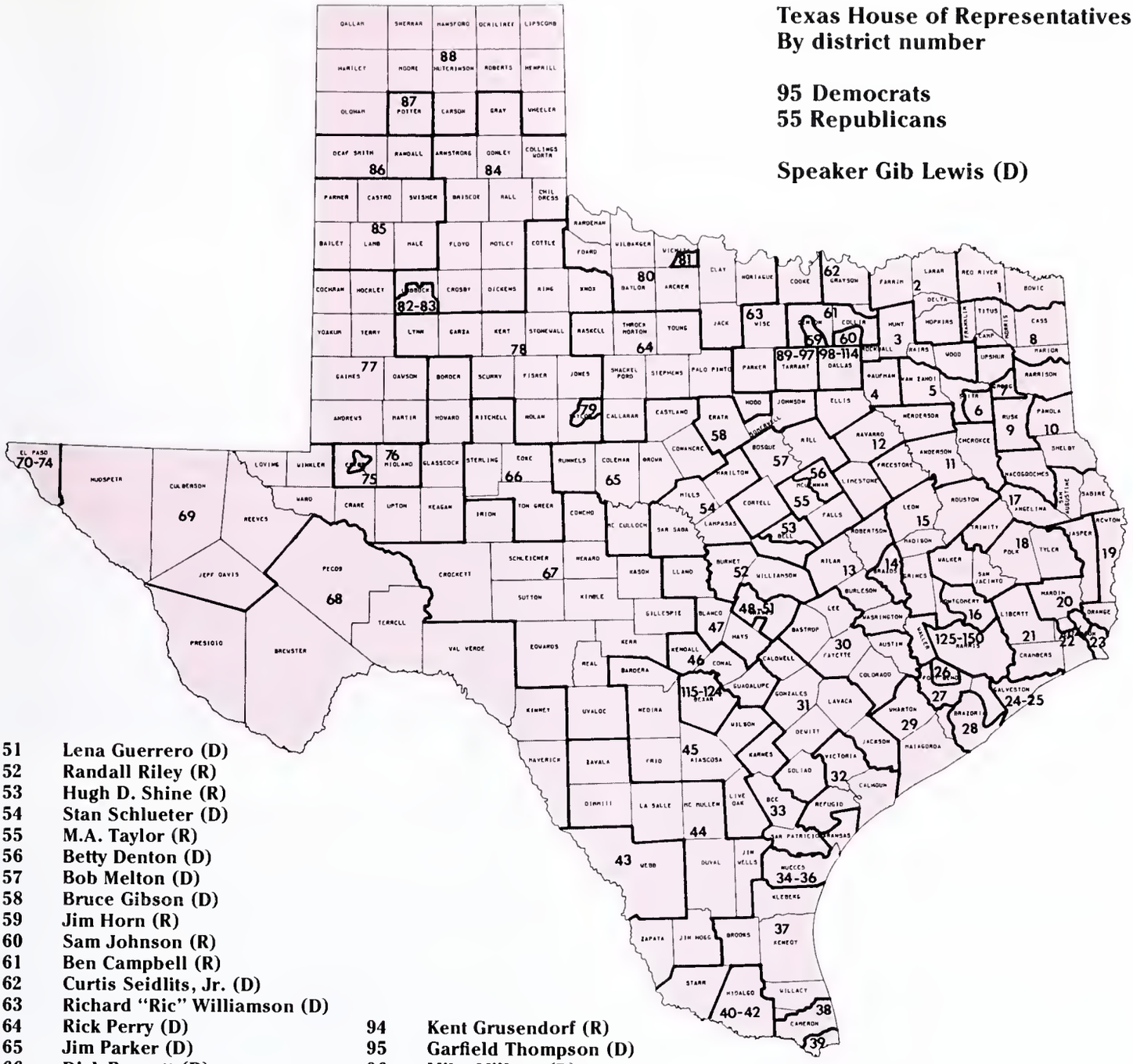
Representatives

Dist.	Name
1	Barry Telford (D)
2	L. P. Pete Patterson (D)
3	Bob Aikin (D)
4	Keith Oakley (D)
5	Bill Hollowell (D)
6	David Hudson (D)
7	Gerald Yost (R)
8	Sam Russell (D)
9	Jim McWilliams (D)
10	Bill Haley (D)
11	Cliff Johnson (D)
12	Tom Waldrop (D)
13	L. B. Kubiak, DVM (D)
14	Richard Smith (R)
15	Mike McKinney (D)
16	Keith Valigura (R)
17	Billy Clemons (D)
18	Allen Ross Hightower, Jr. (D)
19	Ron E. Lewis (D)
20	Jerry Clark (D)
21	Mark Stiles (D)
22	Al Price (D)
23	Frank Collazo, Jr. (D)
24	James Hury (D)
25	Lloyd Criss (D)
26	Jim Tallas (R)
27	Jack Harris (R)
28	John Willy (R)
29	Tom Uher (D)
30	Robert Saunders (D)
31	Phyllis Robinson (D)
32	Steve Holzheauser (R)
33	Robert Earley (D)
34	Hugo Berlanga (D)
35	Eddie Cavazos (D)
36	Ted Roberts (R)
37	Irma Rangel (D)
38	Larry Warner (D)
39	Eddie Lucio, Jr. (D)
40	Alejandro "Alex" Moreno, Jr. (D)
41	Juan Hinojosa (D)
42	Renato Cuellar (D)
43	Henry Cuellar (D)
44	Ernestine V. Glossbrenner (D)
45	Eldon Edge, Sr. (D)
46	Edmund Kuempel (R)
47	Anne Cooper (R)
48	Terral R. Smith (R)
49	Bob Richardson (R)
50	Wilhelmina R. Delco (D)

Texas House of Representatives
By district number

95 Democrats
55 Republicans

Speaker Gib Lewis (D)



51 Lena Guerrero (D)
52 Randall Riley (R)
53 Hugh D. Shine (R)
54 Stan Schlueter (D)
55 M.A. Taylor (R)
56 Betty Denton (D)
57 Bob Melton (D)
58 Bruce Gibson (D)
59 Jim Horn (R)
60 Sam Johnson (R)
61 Ben Campbell (R)
62 Curtis Seidlits, Jr. (D)
63 Richard "Ric" Williamson (D)
64 Rick Perry (D)
65 Jim Parker (D)
66 Dick Burnett (D)
67 Gerald Geistweidt (R)
68 Dudley Harrison (D)
69 Larry Don Shaw (D)
70 Jack Vowell (R)
71 Arves E. Jones, Sr. (R)
72 Paul Moreno (D)
73 Nancy McDonald (D)
74 Nick Perez (D)
75 Gary Watkins (D)
76 Tom Craddick (R)
77 Jim D. Rudd (D)
78 Steve A. Carriker (D)
79 Bob Hunter (R)
80 Charles Finnell (D)
81 John Gavin (D)
82 Nolan J. "Buzz" Robnett (R)
83 Ron Givens (R)
84 Foster Whaley (D)
85 James E. "Pete" Laney (D)
86 John T. Smithee (R)
87 Chip Staniswalis (R)
88 Dick Waterfield (R)
89 Gibson D. Lewis (D)
90 Doyle Willis (D)
91 Bill Carter (R)
92 Charles Evans (D)
93 Chris Harris (R)
94 Kent Grusendorf (R)
95 Garfield Thompson (D)
96 Mike Millsap (D)
97 Bob Leonard, Jr. (R)
98 Gwyn Clarkston Shea (R)
99 Ken Marchant (R)
100 Sam Hudson (D)
101 Anita Hill (R)
102 Patricia Hill(R)
103 Steve Wolens (D)
104 Glenn A. Repp (R)
105 Bill Blackwood (R)
106 Bill Arnold (D)
107 David Cain (D)
108 Al Granoff (D)
109 Bill Hammond (R)
110 Fred Blair (D)
111 Jerald Larry (D)
112 Bill Ceverha (R)
113 A. R. Ovard (R)
114 Fred Agnich (R)
115 Orlando Garcia (D)
116 Gregory Luna (D)
117 Frank Madla (D)
118 Ciro Rodriguez (D)
119 Jerry Beauchamp (D)
120 Lou Nelle Sutton (D)
121 Alan Schoolcraft (R)
122 George Pierce (R)
123 Kae T. Patrick (R)
124 Dan Morales (D)
125 John Culberson (R)
126 D. Barry Connelly (R)
127 Dan Shelby (R)
128 Anthony L. "Tony" Polumbo (D)
129 Ed R. Watson (D)
130 Randy Pennington (R)
131 Ron Wilson (D)
132 Paul Colbert (D)
133 Robert A. Eckles (R)
134 Brad Wright (R)
135 Mike Toomey (R)
136 Ashley Smith (R)
137 Debra Danburg (D)
138 David Patronella (D)
139 Clint Hackney (D)
140 Weldon Betts (D)
141 Senfronia Thompson (D)
142 Harold Dutton (D)
143 Albert "Al" Luna III (D)
144 Erwin W. Barton (D)
145 Ralph Wallace III (D)
146 Al Edwards (D)
147 Larry Q. Evans (D)
148 Roman Martinez (D)
149 Talmadge Heflin (R)
150 Paul J. Hilbert (R)

involved in the good faith peer review effort to recover their attorneys' fees and court costs in a retaliatory suit. The proposed legislation also states that any final and substantive disciplinary action by a peer review entity must be reported to the State Board of Medical Examiners for possible investigation. Rep Mike McKinney (D-Centerville), a practicing physician, will sponsor the legislation.

Just prior to adjournment in 1986, the United States Congress passed a far-reaching peer review immunity and mandatory reporting bill that goes into effect in 1989, after Texas has an opportunity to "opt in," or write, their own statute. TMA-supported peer review legislation probably.will combine a proposed Texas law and some of the stronger provisions of the newly enacted federal law.

Chief Justice Hill favors merit selection of judges

Recent legislative investigations of the Texas Supreme Court, coupled with criticisms of the court's legislative adventurism, have brought new political momentum to longstanding proposals to reform the system whereby judges are selected. A bill that was prefiled for consideration by the 70th Texas Legislature proposes modified merit selection of judges. Under this sytem, the governor would appoint judges from a list of three qualified nominees, recommended by a 15-member nominating commission with citizen and lawyer members. The governor's appointees would be subject to Texas Senate approval and would stand for voter approval on their merits two years from their appointments and each six years thereafter.

Texas Supreme Court Chief Justice John L. Hill, Jr, a vocal advocate of the merit selection of judges, argues in favor of the proposal:

"We believe the use of such a selection would ameliorate many of the destabilizing factors associated with partisan elections and would cause more qualified persons to come forward as candidates for judicial positions and hopefully reduce the increasing number of resignations from our judicial ranks . . . .

"Faced with a large number of choices and limited knowledge of judges, it is not surprising that political party affiliation and/or financial contributions are often the determining factors in partisan elections . . . .

"For those who say that the retention election offers little protection for the voters, I would only direct your attention to the California experience in November 1986, when the three justices of the California Supreme Court, including the chief justice, were removed from office by the retention election method . . . .

"Few people other than lawyers, potential litigants, and a few special interest groups with strong legal interests are concerned enough to contribute to a judicial race . . . .

". . . the vagaries of politics have no proper place in the selection of qualified, impartial judges."

Tort coalition pushes reforms

The Texas Civil Justice League, of which Texas Medical Association is a founding member, is an organization of insurance consumers formed in 1985 to address Texas' liability crisis. The league has more than 300 members, including 136 chambers of commerce and municipalities, 100 corporations, 73 trade and professional associations (among them, numerous medical specialty organizations), 8 individuals, and 5 law firms.

During the 70th Texas Legislature, the league will support legislation to:

(1) Impose limitations and reporting requirements for attorneys' contingent fee contracts.

(2) Abolish joint liability, whereby a defendant who is found to be partially at fault pays for the liability of co-defendants who do not have adequate insurance coverage to pay for their part of the judgment.

(3) Correct venue statutes to prevent forum shopping at the will of the claimant.

(4) Limit punitive damages and change the burden of proof upon which such awards may be predicated.

(5) Offset collateral sources of payments against the final judgment.

(6) Structure awards for future damages exceeding $100,000 and stop payments for future medical expenses and future noneconomic damages upon the death of the claimant.

(7) Limit noneconomic damages.

(8) Provide meaningful sanctions for filing of frivolous lawsuits.

(9) Amend the state's constitution to assure that tort reforms do not conflict with requirements regarding equal access to the courts.

(10) Allow defendants to file affidavits of noninvolvement before trial. Eligible individuals, who are added to the list of defendants, even though they did not participate in an act of malpractice or negligence, would be spared the cost of legal defense and the trauma of a trial.

Speak up

Voice your opinion in the capitol by telling your elected representatives how the liability crisis has affected your practice and your patients. Your county clerk can tell you the names of your senator and representative. The mailing address for all senators in Austin is: PO Box 12068, Austin, TX 78711. The mailing address for all representatives is: PO Box 2910, Austin, TX 78769. Please send a copy of your correspondence to the TMA Public Affairs Office, 1801 N Lamar Blvd, Austin, TX 78701.

News Hotline

For the latest information on medical legislation, call TMA's news hotline toll free throughout the current legislative session. The number is 1-800-252-7003; in Austin, (512) 479-7894.

BERNARD GONIK, MD
SUSAN POKORNY, MD
SYLVIA GARCIA, MD
KATHY WALSH, RN

Pelvic inflammatory disease in the adolescent

Pelvic inflammatory disease (PID) is a serious infectious disease complication frequently identified in the sexually active adolescent. A three-year retrospective review was undertaken to help identify key areas in the management of this patient population where intervention may be beneficial. Overall, 49 adolescents were identified to have PID requiring hospitalization. Poor contraceptive usage, frequent venereal disease exposure, delayed presentation for medical care, and high antimicrobial failure rates were noted. A subset of 24 patients (49%) were identified as having either an adnexal or cul de sac mass on admission, suggesting advanced disease. Within this group, 12 patients (50%) failed to return for follow-up care after discharge. Allocating the responsibility for patient education to established health care providers in the hospital setting was inadequate. Recommendations are made for future intervention strategies.

Pelvic inflammatory disease represents a major, and at times long-lasting, infectious disease complication in the sexually active adolescent. Although significant advances have been made in antimicrobial management, few centers have focused on the educational and social issues of this disease which, in the adolescent, are of paramount importance. To help establish the groundwork for an adolescent-oriented sexually transmitted disease program in our institution, we undertook a three-year retrospective review of adolescent females admitted with the diagnosis of pelvic inflammatory disease. This report represents a summary of our findings and points out areas where future emphasis is needed.

Materials and methods

A retrospective review identified all post-menarchal females to age 19 years who were admitted with the diagnosis of pelvic inflammatory disease from December 1979 through October 1982. The subjects comprising this report were inpatients admitted to a single tertiary care, private, university hospital. Patients were treated by the resident gynecology service with supervision by faculty members of The University of Texas Medical School at Houston. Established criteria for the clinical diagnosis of PID were used (1). Other nongynecologic infectious processes were ruled out by medical history and by clinical and laboratory findings. Endocervical cultures were obtained for *Neisseria gonorrhoeae* on all patients; routine culturing for *Chlamydia trachomatis* was not established during the time period reviewed. Choice of antimicrobial agent(s) was at the discretion of the attending physician. Failure of conservative antibiotic therapy was defined as a continuation or worsening of abdominal or pelvic findings with or without fever after 48 to 72 hours of intravenous therapy. All patients were routinely instructed to return to our gynecology outpatient clinic for follow-up evaluation after discharge. During the study period, no specific individual was responsible for patient education or follow-up.

Results

Over the three years reviewed, a total of 49 patients were identified as having pelvic inflammatory disease that required hospitalization. In 94% of these patients, this diagnosis was based on clinical findings in the emergency room or in the outpatient clinic. The remaining 6% of patients were diagnosed as having pelvic inflammatory disease at the time of laparoscopy with the identification of exudate extruding through the typically erythematous fallopian tubes.

Mean age (± SD) for the group was 17.5 ± 1.4 years (range 14 to 19). Patients were routinely questioned about previous venereal disease contact; 47% admitted to previous exposure or infection. Fifty-three percent of the adolescent patients admitted to being pregnant at least one time in the past (mean gravidity of 1.4 ± 0.8). The majority (65%) of the subjects reviewed used no contraception. Of the remainder, 16% used birth control pills, 10% used IUDs, and 8% reported using a barrier method. Typical presenting signs and symptoms for these patients are shown in Fig 1. The most common presenting complaints were abdominal pain (100%) and fever (49%). Additional symptoms included menstrual irregularity, vaginal discharge, and urinary tract symptomatology. Upon routine culturing of the endocervix, 45% of the subjects demonstrated the presence of *Neisseria gonorrhoeae*. A subset of 24 patients (49%) were identified on admission to have either an adnexal or cul de sac mass, suggesting advanced disease.

All patients received intravenous antibiotics during the study period. The majority (51%) received

1. Presenting signs and symptoms in adolescents diagnosed to have pelvic inflammatory disease (n=49).

	No. of Patients	%
Menstrual irregularity	12	24
Urinary frequency/dysuria	10	20
Vaginal discharge	10	20
Fever	24	49
Lower abdominal pain	49	100
Adnexal/cervical tenderness	48	98
Adnexal/cul de sac mass (Advanced disease)	24	49
Positive GC culture	22	45
Mean white blood cell count	13.4 ± 5.2	
Mean erythrocyte sedimentation rate	39.6 ± 17.7	

Bernard Gonik, MD, and Kathy Walsh, RN, Department of Obstetrics, Gynecology and Reproductive Sciences, The University of Texas Medical School at Houston; Susan Pokorny, MD, Department of Obstetrics and Gynecology, Baylor College of Medicine, Houston; and Sylvia Garcia, MD, Department of Obstetrics and Gynecology, Texas Tech University Health Sciences Center, Lubbock, Tex. Send reprint requests to Dr Gonik, The University of Texas Medical School at Houston, 6431 Fannin, Room 3270, Houston, TX 77030.

"triple" therapy which consisted of a penicillin, an aminoglycoside, and clindamycin. The remainder were treated with some combination of the above regimen or with a second- or third-generation cephalosporin and/or doxycycline. Medical treatment failed to help seven (14%) patients, and surgical exploration for continued symptomatology was required. Of these, six underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy. The seventh patient underwent a unilateral salpingo-oophorectomy. Although the success of treatment in the advanced disease group was quite variable, 12 patients (50%) failed to return for follow-up to our gynecology clinic after discharge.

Discussion

Recent investigations have demonstrated an annual calculated risk of 1:8 for sexually active adolescents to develop PID versus 1:80 in women who are 24 years of age or older (2). Suggested reasons for these differences relate to both physiologic and social issues and include alterations in cervical mucus due to immature and anovulatory menstrual cycles, the infrequent use of adequate oral or barrier contraception, and experimentation with sexual relationships and multiple consorts (3). In addition, modest financial resources, peer pressure, and fear of parental discovery may inhibit the sexually active adolescent from attending public or free clinics available in the community.

Such delays can make the adolescent with PID much more difficult to treat because of delayed medical intervention; we demonstrated a 14% incidence of failed antibiotic therapy requiring major surgical extirpation of pelvic structures. This alarmingly high rate of failures, coupled with the fact that half of our study patients initially presented with evidence of advanced disease, suggests that the adolescent commonly worsens her own prognosis by denying overt symptomatology. Although more conservative surgical approaches to a patient who fails standard antibiotic therapy are gaining acceptance (4), these newer measures will not, in all likelihood, eliminate the long-term sequelae of infertility and chronic pelvic pain.

The data presented in this study clearly support previous concerns regarding the significance of PID in the adolescent female. The large number of patients in this study with previous pregnancy experience, previous exposure to venereal disease, lack of adequate contraception, and poor follow-up, support the need for programs specifically directed at this segment of our population. Once confronted with the acute problem of an adolescent with PID, hospitalization appears to be uniformly warranted. Allocating patient education responsibilities to established health care providers within the hospital setting is inadequate, as demonstrated in this review, unless clear guidelines are developed.

Perhaps one of the most important elements in achieving a successful outcome is the long-term follow-up of these patients. Because of the recurrent risk of PID and the higher incidence of associated problems such as cervical dysplasia, serial contacts with the patient are mandatory. One method to accomplish this and many of the other goals outlined would be through the employment of a nurse coordinator whose primary role would be to provide consistency and continuity to this select population of patients. This same person would be in an optimal position to accumulate prevalence data, to assess changes in community services, and to assist in establishing educational programs for other related health maintenance issues. We are currently using this type of approach with another major problem—pregnancy in the adolescent.

REFERENCES

1. Hager WD, Eschenbach DA, Spence MR, et al: Criteria for diagnosis and grading of salpingitis. Obstet Gynecol 61(1):113–114, 1983.

2. Westrom L, March P: Pelvic inflammatory disease. I. Epidemiology, diagnosis, clinical manifestations, and sequelae, international perspectives on sexually transmitted diseases: impact of venerology, fertility, and maternal fetal morbidity, Holmes KK, Marsh P (eds). New York, McGraw-Hill Book Co, 1982, pp 615-632.

3. Eschenbach DA, Harnisch JP, Holmes KK: Pathogenesis of acute pelvic inflammatory disease: role of contraception and other risk factors. Am J Obstet Gynecol 128(8):838–850, 1977.

4. Landers DV, Sweet RL: Current trends in the diagnosis and treatment of tuboovarian abscess. Am J Obstet Gynecol 151(8):1098–1110, 1985.

DAVID HUFFMAN, MD
DANIEL M. MUSHER, MD
ALLEN G. REUBEN, MD

Drug treatment of pneumonia due to *Pneumocystis carinii*

The increasing incidence and changing of epidemiology of pneumonia due to Pneumocystis carinii *has, in many cases, transferred the care of this infection from subspecialists in infectious diseases to primary care physicians. Initial treatment with pentamidine or trimethoprim/sulfamethoxazole (TMP/SMX) is associated with a good response rate, but the organisms are not eradicated from the lungs and relapses are common. Pentamidine causes toxic effects that are serious enough to require its discontinuation in about one half of cases. Although TMP/SMX has often been regarded as relatively benign, in patients with AIDS this combination causes severe complications at about the same rate. We generally initiate treatment with TMP/SMX in patients who can tolerate oral therapy, and with pentamidine in those who require intravenous therapy, but both groups require close observation for toxicity complications of therapy.*

The emergence of the acquired immune deficiency syndrome (AIDS), caused by infection with the human retrovirus HIV (human immunodeficiency virus, formerly called HTLV-III or LAV), has thrust pneumonia due to *Pneumocystis carinii* into a position of prominence. Before 1980, treatment of this opportunistic infection fell into the province of oncologists and infectious disease specialists, who had achieved relatively good therapeutic results using pentamidine* in the 1960s and early 1970s, or the apparently equally effective and seemingly less toxic combination of trimethoprim and sulfamethoxazole (TMP/SMX) in the late 1970s. Now, however, primary care physicians are faced with an increasing number of patients with AIDS, of whom more than one-half are expected to develop pneumocystis pneumonia (1). These patients are less likely to respond well to therapy than those whose infection was associated with other immune deficiencies, and are far more likely to undergo a relapse after its completion (2,3); they are also unusually susceptible to adverse reactions from TMP/SMX (3–6). The purpose of this article is to examine the clinical efficacy and potential toxicity of pentamidine, TMP/SMX, and a relatively new combination of TMP/dapsone in the treatment of infection due to *P carinii*.

Mechanism of action

Several possible mechanisms have been proposed to explain the anti-pneumocystis activity of pentamidine, including a blocking effect on energy production, inhibition of protein synthesis, and restriction of nucleic acid synthesis and function (7). In contrast, the mechanism of action of TMP/SMX has been well defined, at least against bacteria. The sulfonamides interfere with bacterial synthesis of folic acid from para-aminobenzoic acid, while trimethoprim preferentially inhibits bacterial dihydrofolate reductase. Given together, these two have synergistic activity against many bacteria even in the face of resistance to one of the two, while the rate of emergence resistance is much lower than when either drug is used alone. Dapsone (4–4' diaminodiphenylsulfone) is a synthetic compound that has been widely used to treat leprosy; it is thought to inhibit microorganisms by the same kind of interference with folate synthesis.

Pharmacology and dosage

Pentamidine is given at 4 mg/kg/day by slow intravenous administration. Peak serum levels range between 0.5 and 3.4 mcg/ml, and the average serum half-life is 17 minutes (8). Pentamidine is excreted in the urine over a period of weeks. Although higher serum concentrations have been observed in patients who have impaired renal function, the precise relation to renal clearance remains to be established. Some authorities have recommended empiric lengthening of dosage interval to 48 hours in patients whose creatinine clearance is less than 10 ml/min (9). Recent animal studies have demonstrated substantially higher lung concentrations after aerosol than after parenteral administration (8,10), and application of this route of administration for human subjects may eventually provide an alternative to parenteral drug administration.

TMP/SMX is well absorbed following oral ingestion, and physicians should resist the tendency to use an intravenous preparation unless the patient is unable to take medications by mouth. The dosage to treat *P carinii* pneumonia in patients with normal renal function is 100 mg/kg/day of sulfamethoxazole and 20 mg/kg/day of trimethoprim in four divided doses. For intravenous use, each dose must be diluted in 250 ml of fluid, which may present a problem if fluid restriction is required. In patients with renal impairment and creatinine clearance of 15–30 ml/minute, the dose should be reduced by 50%; its use is not recommended in patients having creatinine clearance of less than 15 ml/minute. When dapsone and trimethoprim are given together, the dose of dapsone is 100 mg/day as a single dose, and of trimethoprim 20 mg/kg/day in four divided doses.

Drug efficacy

Determining a minimum inhibitory concentration of pentamidine for *P carinii* has been difficult. In

*The most commonly used form is pentamidine isethionate, which will be called pentamidine for purposes of this review unless stated otherwise.

David Huffman, MD; Daniel M. Musher, MD; and Allen G. Reuben, MD, Medical Service, Infectious Disease Section, Veterans Administration Medical Center, 2002 Holcombe Blvd, Houston, TX 77211, and the Departments of Medicine and Microbiology and Immunology, Baylor College of Medicine, Houston. This research was supported by the Veterans Administration.

tissue cultures, *P carinii* is inhibited by about 0.1 mcg/ml of pentamidine (11). The minimum microbicidal concentration has not been determined because it is difficult to ascertain whether residual organisms are viable. The relation between these in vitro findings, known serum levels, and efficacy of therapy has not been established. Limited in vitro studies of the action of TMP/SMX against *P carinii* have shown a dose-related inhibitory effect on the growth of the organisms (12); this effect was reduced by the presence of folic acid in the growth medium. Dapsone treats *Pneumocystis*-infected rats as effectively as the combination of TMP/SMX (13).

Indications for therapy and results

In 1958, pentamidine was first shown to be effective in treating the infantile form of what was then called interstitial plasma cell pneumonia; widespread use of pentamidine during the subsequent decade reduced the mortality of this disease from 50% to about 3%. Pentamidine was also the first drug to alter the natural history of *P carinii* pneumonia in adults, the mortality from which had approached 100% prior to its introduction. With treatment, the overall mortality rate in adults has been reduced to 25 to 50%, depending upon the severity and nature of the underlying disease. Pentamidine remained the drug of choice for *P carinii* pneumonia until the mid-1970s, when TMP/SMX was observed to be equally effective while producing significantly fewer side effects (14,15). Because of these apparent advantages, the use of pentamidine came to be reserved for cases in which TMP/SMX was contraindicated or had proven ineffective. The unexplained high rate of adverse reactions to TMP/SMX in patients with AIDS has led to a resurgence in the use of pentamidine. Nevertheless, a recent prospective study showed equal rates of adverse reactions in AIDS patients treated with TMP/SMX or pentamidine (6).

No significant differences have been found in mortality between patient cohorts with AIDS randomized to initial treatment with pentamidine or TMP/SMX (4,6,16), although the numbers in each series are small, and one study (6) might have been interpreted as showing a slight advantage for pentamidine. Treatment with either regimen can be expected to bring about defervescence in 4-6 days in most non-AIDS patients. Those with AIDS may respond less consistently (6,17); alternatively, other causes for fever may render interpretation of responses difficult. The mortality rate in treated pneumocystis pneumonia varies with the type and severity of underlying disease, the immune responsiveness of the host, and the presence of associated infections. One-quarter of cases or more may simply fail to respond. Nonsurvivors usually succumb to progressive respiratory insufficiency, complications of the adult respiratory distress syndrome, other infections, and/or their underlying disease.

The optimal duration of treatment of pneumocystis pneumonia in AIDS is uncertain. Treatment in non-AIDS patients has generally been discontinued after 10–14 days. Because of the slow response to therapy, the persistence of organisms in infected tissues and the inordinate relapse rate (25%) in patients with AIDS, some authorities recommend treating these individuals for 3 to 6 weeks (2,4–6). However, in practice, the overall duration of therapy is frequently limited by complications. In an all-too-common scenario, a patient who is started on TMP/SMX develops a rash within 7–10 days; treatment is changed to pentamidine, which also must be discontinued after one week because of profound neutropenia.

Recurrence and prophylaxis of pneumocystis infection

Pneumocystis are readily detected microscopically in biopsy and autopsy specimens after 2 to 3 weeks of apparently successful treatment with either therapy. These organisms generally are not eradicated in immunosuppressed patients even with a prolonged course of treatment. A method for distinguishing viable from nonviable forms has been described, but has not been applied successfully to examining post-treatment lung tissue specimens.

After treatment with pentamidine or TMP/SMX, *P carinii* pneumonia recurs after seemingly successful therapy in about 10% of cases in children with cancer and in one-quarter of patients with AIDS, although the relative frequency of relapse following these two forms of treatment has not been fully studied. This high rate of relapse suggests a possible role for long-term prophylaxis, ie, continuous antimicrobial therapy to prevent recurrence of clinically significant infection after the initial course of therapy. Prophylaxis with TMP/SMX has been effective in cancer patients (18); however, as noted above, the high rate of adverse drug reactions to TMP/SMX in patients with AIDS makes this approach problematic. Perhaps further study of pentamidine for prophylaxis is justified, even though parenteral administration is required. Alternatively, a TMP/dapsone regimen, which enables a lowering of the therapeutic dosage, may warrant further study.

Side effects

Side effects of these drugs are shown in Fig 1. The clinical utility of pentamidine has been impaired by adverse effects which occur in about one half of cases (3–7), even though the majority of these are reversible. Severe hypotension occurs during rapid intravenous administration of pentamidine, but only rarely during slow infusion. Severe local reactions at

the site of injection limit the use of intramuscular administration. A number of hematologic effects of pentamidine have been described. Leukopenia and thrombocytopenia were only occasionally attributed to pentamidine prior to the advent of AIDS, but these side effects occur commonly enough and with sufficient severity in patients with AIDS (3,6) that therapeutic efforts are seriously curtailed. In many, but by no means all of these cases, prior therapy with TMP/SMX may have contributed to hematologic suppression. Nephrotoxicity has been reported frequently (4,10) although its true incidence is uncertain since patients receiving pentamidine often are treated concurrently with other nephrotoxic drugs. Reversible elevations of urea nitrogen and creatinine are common; the urine may contain red blood cells, protein, and granular casts (15), and tubular necrosis with azotemia may supervene. Transient and reversible elevations in liver function test results are frequently associated with pentamidine administration, but no severe hepatic dysfunction has been reported. Pentamidine induces a direct cytolytic action on beta cells of the pancreas; an early release of insulin is followed by selective disappearance of beta cells in a manner similar to that seen with streptozocin. Thus, hypoglycemia or hyperglycemia may occur and permanent diabetes may result (19,20). Although islet cells are more sensitive to pentamidine than are the exocrine cells, rare cases of acute pancreatitis have also been described (21).

Miscellaneous adverse effects of pentamidine include hypocalcemia, facial flushing immediately following injection, production of a metallic or unpleasant taste sensation, dizziness, confusion or hallucinations, and erythema multiforme. Several deaths have been reported; most have been preceded by local necrosis at the site of intramuscular administration, with progressive nausea, vomiting, diarrhea, syncope, adbominal pain, seizures, and coma.

During TMP/SMX therapy in non-AIDS patients, there is a relatively low (14%) incidence of side effects; gastrointestinal disturbances and skin rashes comprise the majority, with only occasional reports of hematologic disorders, and elevations of liver function test values (14,15). In contrast, patients with AIDS appear to be extraordinarily susceptible to adverse effects of TMP/SMX. Fever, skin rash, and suppression of one or several bone marrow cell lines occur in 50% to 87% of cases (5,6,17), often necessitating discontinuation of therapy. Skin rashes may be maculopapular or petechial, and are often accompanied by fever, pruritus, nausea, and vomiting. Symptoms usually resolve rapidly following cessation of TMP/SMX and recur rapidly upon readministration. Leukopenia or granulocytopenia has been noted in up to one half of AIDS patients during TMP/SMX therapy. Serum folate levels have been reported to be normal, although bone marrow examination may reveal megaloblastic changes; concurrent administration of folinic acid with TMP/SMX has no effect (4). Thrombocytopenia, probably due to increased peripheral platelet destruction, occurs occasionally. Elevations in liver function tests have been reported in 20% of patients. These abnormalities typically appear during the second week of TMP/SMX therapy and resolve after its discontinuation.

The mechanism for the greatly increased incidence of adverse effects in AIDS patients receiving TMP/SMX is unknown. Their nature, time of development, resolution following therapy, and recurrence with rechallenge all suggest drug hypersensitivity, but why infection with the human immunodeficiency virus (HIV) should cause this is unknown. Prior infection with Epstein-Barr virus or cytomegalovirus may play a role analogous to that of ampicillin rashes in infectious mononucleosis.

Dapsone is an oxidant drug, causing hemolysis at 200 mg/day, and at lower dosages in patients with glucose-6-phosphate dehydrogenase deficiency. Gastrointestinal side effects include severe nausea and vomiting, and skin findings include rashes, pruritus, and exfoliative dermatitis. A syndrome reminiscent of infectious mononucleosis or a drug-induced lupus erythematosus also occurs. Dapsone is also known to cause albuminuria, cholestatic jaundice, and hepatitis.

Therapy of *Pneumocystic carinii* pneumonia: special considerations

The choice between pentamidine and TMP/SMX for the treatment of *P carinii* pneumonia depends upon the underlying disease and the clinical condition of the patient. Patients with neoplasia or immunodeficiency due to causes other than HIV infection tolerate high-dose TMP/SMX therapy with

1. Adverse drug reactions.

Pentamidine
Hypotension
Leukopenia, thrombocytopenia
Hypoglycemia, hyperglycemia
Nephrotoxicity
Abnormal liver function tests
Miscellaneous
TMP/SMX
Skin rashes
Fever
Anemia, leukopenia, granulocytopenia, thrombocytopenia
Abnormal liver function tests
Dapsone
Hemolysis (severe in glucose-6-phosphate dehydrogenase deficiency)
Severe nausea, vomiting
Skin rashes, pruritus
Hepatitis, cholestatic jaundice

fewer adverse effects than are seen during treatment with pentamidine, and the former regimen is generally prescribed as first-line therapy. In those patients who fail to respond to TMP/SMX within 5 to 7 days, pentamidine can be substituted, but this initial therapeutic failure implies a poor prognosis. It may be preferable to initiate therapy with pentamidine if patients cannot tolerate oral therapy, or the additional fluid volume during intravenous administration of TMP/SMX is a problem.

In patients with AIDS, the inordinately high incidence of hematologic and allergic reactions to TMP/SMX has prompted a return to initial treatment with pentamidine. For unclear reasons, others have observed fewer problems with TMP/SMX and prefer its use as first-line therapy for pneumocystis pneumonia in AIDS patients (M. Siberkoff and J. J. Rahal, personal communication, May 1986). Data obtained in a prospective, comparative study of AIDS patients suggest that, although the kinds of serious complications differ, their incidence during treatment with pentamidine or TMP/SMX is essentially the same (6). TMP/SMX should not, of course, be given to patients who have already demonstrated allergic reactions to sulfa drugs. A recently reported open trial of TMP/dapsone showed a very good response rate in selected AIDS patients with pneumocystis pneumonia (23); trials that compare this combination with pentamidine or TMP/SMX need to be done before any conclusions can be made about the relative merits of these regimens.

Despite the high frequency of therapeutic failures and relapses, presumably reflecting the severity of the immunosuppression, the use of multiple drugs is not recommended. Concurrent administration of pentamidine and TMP/SMX has not been shown to cause additive microbicidal activity in vitro or enhanced clinical response in vivo, whereas the adverse effects may be additive (24).

REFERENCES

1. Catterall JR, Potasman I, Remington JS: Pneumocystis carinii pneumonia in the patient with AIDS. Chest 88(5):758–762, 1985.

2. Shelhamer JH, Ognibene FP, Macher AM, et al: Persistence of Pneumocystis carinii in lung tissue of acquired immunodeficiency syndrome patients treated for pneumocystis pneumonia. Am Rev Respir Dis 130(6):1161–1165, 1984.

3. Kovacs JA, Hiemenz JW, Macher AM, et al: Pneumocystis carinii pneumonia: a comparison between patients with the acquired immunodeficiency syndrome and patients with other immunodeficiencies. Ann Intern Med 100(5):663–671, 1984.

4. Haverkos HW: Assessment of therapy for Pneumocystis carinii pneumonia. PCP Therapy Project Group. Am J Med 76(3):501–508, 1984.

5. Gordin FM, Simon GL, Wofsy CB, et al: Adverse reactions to trimethoprim-sulfamethoxazole in patients with the acquired immunodeficiency syndrome. Ann Intern Med 100(4):495–499, 1984.

6. Wharton M, Coleman DL, Wofsy C: Prospective randomized trial of Trimethoprim sulfamethoxazole or pentamidine for Pneumocystis carinii pneumonia in the acquired immunodeficiency syndrome. Ann Intern Med 105(1):37–44, 1986.

7. Sands M, Kron MA, Brown RB: Pentamidine: a review. Rev Infect Dis 7(5):625–634, 1985.

8. Bernard EM, Donnelly HJ, Maher MP, et al: Use of a new bioassay to study pentamidine pharmacokinetics. J Infect Dis 152(4):750–754, 1985.

9. Western KA, Perera DR, Schultz MG: Pentamidine isethionate in the treatment of Pneumocystis carinii pneumonia. Ann Intern Med 73:695–702, 1970.

10. Bernard EM, Donnelly HJ, Koo HP, et al: Aerosol administration improves delivery of pentamidine to the lungs. 25th Intersci Conf Antimicrob Agents Chemother (Abstract No. 552), Minneapolis, Minn, Sept 29-Oct 10, 1985.

11. Cushion MT, Stanforth D, Linke MJ, et al: Method of testing the susceptibility of Pneumocystis carinii to antimicrobial agents in vitro. Antimicrob Agents Chemother 28(6):796–801, 1985.

12. Pesanti EL: In vitro effects of antiprotozoan drugs and immune serum on Pneumocystis carinii. J Infect Dis 141(6):775–780, 1980.

13. Hughes WT, Smith BL: Efficacy of diaminodiphenylsulfone and other drugs in murine Pneumocystis carinii pneumonitis. Antimicrob Agents Chemother 26(4):436–440, 1984.

14. Young LS: Trimethoprim-sulfamethoxazole in the treatment of adults with pneumonia due to Pneumocystis carinii. Rev Infect Dis 4:608–613, 1982.

15. Siegel SE, Wolff LJ, Baehner RL, et al: Treatment of Pneumocystis carinii pneumonitis. A comparative trial of sulfamethoxazole-trimethoprim v pentamidine in pediatric patients with cancer: report from the Children's Cancer Study Group. Am J Dis Child 138(11):1051–1054, 1984.

16. Hughes WT, Feldman S, Chaudhary SC, et al: Comparison of pentamidine isethionate and trimethoprim-sulfamethoxazole in the treatment of Pneumocystis carinii pneumonia. J Pediatr 92(2):285–291, 1978.

17. Small CB, Harris CA, Friedland GH, et al: The treatment of Pneumocystis carinii pneumonia in the acquired immunodeficiency syndrome. Arch Intern Med 145(5):837–840, 1985.

18. Wilber RB, Feldman S, Malone WJ, et al: Chemoprophylaxis for Pneumocystis carinii pneumonitis: outcome of unstructured delivery. Am J Dis Child 134(7):643–648, 1980.

19. Bouchard P, Sai P, Reach G, et al: Diabetes mellitus following pentamidine-induced hypoglycemia in humans. Diabetes 31(1):40–45, 1982.

20. Murdoch JK, Keystone JS: Pentamidine and hypoglycemia. Ann Intern Med 99:879, 1983.

21. Ganda OP: Pentamidine and hypoglycemia, letter. Ann Intern Med 100(3):464, 1984.

22. Adverse reactions to dapsone, editorial. Lancet 2(8239):184–185, 1981.

23. Leoung GS, Mills J, Hopewell PC: Dapsone-trimethoprim for Pneumocystis carinii pneumonia in the acquired immunodeficiency syndrome. Ann Intern Med 105(1):45–48, 1986.

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH

INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Robert S. McFadden, MD
Daniel E. Whitman, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
Eugene M. Hoyt, MD
James V. Ryan, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

BILL T. TEAGUE, BS, MT(ASCP)SBB
PABLO J. FORTES, BS(ASCP)SBB
JOHN DRURY, BA
RONALD PHILLIPS, MT(AMT)

Blood donor screening for AIDS: self-exclusion with bar codes

Bill T. Teague, BS, MT(ASCP)SBB, Pablo J. Fortes, BS(ASCP)SBB John L. Drury, BA, Ronald Phillips, MT(AMT), Gulf Coast Regional Blood Center, 1400 La Concha Lane, Houston, TX 77054. Send reprint requests to Mr Teague.

The safety of the blood supply in the United States has always been of primary concern to blood bankers. Due to heightened media coverage of acquired immune deficiency syndrome (AIDS), public awareness and fear of potentially dangerous blood has become acute. An effective, confidential system whereby donors may prevent their blood or plasma from being used for transfusion or for the preparation of plasma derivatives is presented and results reviewed. Using a bar-code label, which they affix to their donor record, donors may indicate they are not in a high-risk group for AIDS and designate their donation "for transfusion." If in a high risk group, they may designate their blood "for laboratory studies only." Over a six-month period, 0.19% of the low-risk donations were found to be repeatably reactive with the HTLV-III antibody test compared with 1.61% for the high-risk donations.

The safety of the blood supply in the United States has always been of prime concern to blood banks serving the transfusion needs of patients. In 1985, some 13 million units of blood and blood components were made available for patient use in this country. And, while this blood is subjected to the most sophisticated testing presently known to medical technology, media coverage of the AIDS story has led to an acute fear of potentially dangerous blood.

Overcoming public fear, as well as developing donor screening protocols that are effective and sensitive to the social needs of those groups considered at high risk, has challenged the blood banking industry more than any other single issue in its history. In February 1983, the Food and Drug Administration (FDA), with the concurrence of the American Association of Blood Banks, the American Red Cross, the Centers for Disease Control and the Council of Community Blood Centers, issued the first set of AIDS screening recommendations to blood banks.

FDA recommended that all blood-collecting agencies implement an addition to their pre-donation screening procedures. The process involved the review of an AIDS information card by each prospective donor and their self-exclusion if they felt their donation to be unsafe. The information card included a brief history of the syndrome, a defined list of those considered at high risk to contract and/or transmit the syndrome, and the known symptoms. The card also asked donors in high-risk groups not to donate and placed emphasis on self-exclusion, if appropriate.

Hypothesis

Using the FDA recommendations as baseline protocol, the Gulf Coast Regional Blood Center (The Blood Center) in Houston hypothesized that if a system could be developed to eliminate blood donations from persons at high risk for AIDS—who through personal choice or social pressure presented themselves as donors—the risk of transfusion-associated AIDS could be markedly reduced. The hypothesis depended on the confidentiality of the system developed to protect individual rights.

Methods

Beginning in March 1983, the blood program in the Texas Gulf Coast region complied with the FDA recommendations with the cooperation of the local gay community. Almost 400,000 units of blood and blood components were transfused to patients in 85 hospitals in the 17-county region in 1985.

Recognizing that donor confidentiality was a key social and safety element to a successful donor screening procedure, The Blood Center made revisions in the system in February 1984 to improve donor confidentiality and thus the safety of the blood supply. The revisions required all presenting blood donors to review updated AIDS information (as called for in the FDA recommendations) and to privately indicate, on a provided form, whether their blood donation was to be used "for transfusion," if they were not in a high-risk group or otherwise felt their donation to be safe, or "for laboratory studies only," if they were in a high-risk group or otherwise questioned the safety of their blood donation.* This form, checked in private, was then folded, stapled, returned to the screener, and attached to the donation medical record card. The information provided allowed the blood center's laboratory to remove from the blood supply those units indicated "for laboratory studies only" and to place that donor's name in the deferred donor directory. During its six-month life, the system identified 321 units for laboratory studies only. While proving to be an effective mechanism to eliminate potentially dangerous blood and thus to improve the safety of the blood supply, the system was an administrative and costly burden.

In September 1984, the blood center further improved the confidential nature of the protocol by introducing a donation designation card (Fig 1) which contained instructions and two pressure-sensitive bar-coded labels.

In this refined system, the donor privately peels one of the two labels ("for transfusion" or "for laboratory studies only") from the card and affixes it

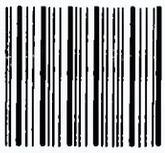
*The original donation designation form was based on a program used by the Greater New York Blood Program, New York, NY.

DONATION DESIGNATION

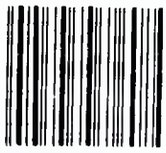
If you ARE NOT INCLUDED in one of the high risk groups outlined on the AIDS Information form and you do not have or have not had any of the symptoms associated with AIDS and you are not included in one of the categories listed under important instructions to donors, please peel and affix the bar coded label designated for TRANSFUSION as instructed.

If you ARE INCLUDED in one of the high-risk groups outlined on the AIDS Information form or you have or have had any of the symptoms associated with AIDS or you are included in one of the categories listed under important instructions to donors, please peel and affix the bar coded label designated for LAB STUDIES as instructed.

FOR TRANSFUSION



FOR LAB STUDIES



Your response to this questionnaire is strictly confidential and vital to the safety of the blood supply in our region. Peel and apply proper label in the space marked with X in the donor record.

Please, discard remaining portion of this form at your convenience.
GC200B (9/85)
Gulf Coast Reg. Bood Center — Houston, Texas 77004

1. Donation designation card with bar-coded labels. One label indicates that the donor's blood is "for transfusion." The other label shows that the donor's blood should be used "for laboratory studies only."

3. Blood donations designated "for tranfusion" vs "laboratory studies only."

	1984 (Mar–Dec)	1985 (Jan–Nov)
Units collected	144,366	154,694
"For transfusion"	143,721 (99.55%)	154,115 (99.67%)
"For laboratory studies only"	645 (0.45%)	579 (0.33%)

4. HTLV-III antibody testing, June 1 through November 1, 1985

Total Collections	For Transfusion	For Laboratory Studies Only
86,052	85,742	310
Repeatably reactive	164 (0.19%)	5 (1.61%)
Western blot positive	64 (0.07%)	4 (1.29%)

directly to the donation record form.

Implementing this revision brought two immediate benefits. First, a greater level of confidentiality was provided. With the bar-coded label affixed, only the donor and the computer have knowledge of the designation of the donation. Should the need arise, only three members of The Blood Center's professional staff have authorized computer access to the information. The second benefit is that the costly and labor-intensive work involved in unstapling, unfolding, and hand-entering data into the computer is eliminated. The bar-coded label is optically read by a computer wand.

During the 14-month period, September 1984 to November 1985, less than 0.5% of donors presenting indicated their donation was "for laboratory studies only" (Fig 2). These data suggest first that The Blood Center, in cooperation with the high-risk community, has been effective in educating high-risk donors not to donate. Second, it indicates that high-risk donors are indicating that their donation is not to be used for transfusion. It appears that the confidential nature of the bar-coded donation designation system has the confidence of this group of donors.

As The Blood Center approached the implementation of HTLV-III antibody testing, the indications were that the system worked well in terms of protecting the blood supply.

Now, after six months of HTLV-III antibody testing, we find that the test results substantiate findings that the donation designation system is effective (Fig 3).

The extremely low number of "for transfusion" donors who test repeatably positive for the HTLV-III antibody suggests that these donors are, in fact, biologically safe donors or did not feel they were at high risk at the time of donation. The higher percentage of "for laboratory studies only" donors, 1.29%, testing repeatably positive and Western Blot positive for the antibody, are in fact indicating that their donation should not be used for transfusion.

Two very positive results have come from this effort to implement an effective donor screening program. First and most important is that a blood supply, which is as safe as humanly possible, is provided for patient use. And, second, with the careful sharing of results of the program with the public, we are helping the public understand that it is safe to donate blood and that the chances of contracting AIDS through blood transfusion are minimal.

PHYSICIANS

We are announcing opportunities for you to serve your country as an Air Force Reserve physician/officer. You can make new professional associations, obtain CME credit and help support the Air Force mission. For those who qualify, retirement credit can be obtained as well as low cost life insurance. One weekend a month plus two weeks a year or less can bring you pride and satisfaction in serving your country.

Call: (512) 385-1816
Or Fill Out Coupon and Mail Today!

To: Health Professions Recruiting
2610 RRS/RSH
Bergstrom AFB, TX 78743-6002

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Prior Service? Yes ____ No ____

Medical Specialty _____ Date of Birth _____

AIR FORCE RESERVE 10-710-1084

A GREAT WAY TO SERVE

Starlite Village Hospital

Center Point, Texas

Ph. 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Annabelle Lindner
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED

BEN H. QUINNEY JR., M.D.

ANNOUNCES

THE RELOCATION OF HIS

OFFICE FOR THE PRACTICE OF

MEDICAL ONCOLOGY

AND

HEMATOLOGY

TO

1800 BUCKNER SQUARE, SUITE 102

SHREVEPORT, LA. 71101

OFFICE HOURS
BY APPOINTMENT

318/227-1907

MICHAEL S. OBERG, MD
BERNARD A. McGOWEN, MD
DAVID A. KLEIMAN, MD

Case report: loiasis 15 years after exposure

Michael S. Oberg, MD; Bernard A. McGowen, MD; David A. Kleiman,MD; South Arlington Medical Center, 3301 Matlock Rd, Arlington, TX 76015. Send reprint requests to Dr Oberg.

A 25-year-old Texas resident presented to a minor emergency medical center for irritation in the left eye. Further examination revealed that the irritation was caused by a female Loa loa *worm. The patient was a native of Cameroon, an area endemic for* Loa loa, *but he had not lived there since age 10. This case is being reported to record the unusually long time between exposure and manifestation of the disease and to recall the importance of considering endemic diseases when evaluating common complaints in patients from other parts of the world, even when years have passed since their residence there. Our brief discussion of* Loa loa *includes a review of diagnosis, treatment, and complications.*

A 25-year-old black man was initially seen in a minor emergency center for irritation in the left eye. He was examincd and treated for conjunctivitis with topical antibiotic. The next day he returned complaining of a swelling in the bulbar conjunctiva. Initially this was believed to be an allergic edema, but closer examination revealed a serpiginous swelling that writhed. The appearance resembled a wriggling snake under a sheet. The patient was referred that day to an ophthalmologist.

Visual acuity was 20/20 in each eye. Pupils and extraocular movements were normal. On gross examination of the left eye, there was a yellowish worm-like structure in the subconjunctival space of the medial aspect. After topical anesthesia, the worm-like structure moved. Intraocular pressure was normal in both eyes as were results of the examination of the posterior aspects. There was no evidence of intraocular parasites in either the anterior chamber, vitreous cavity, or subretinal space. An incision was made over the swelling and the parasite was removed without complications. Its appearance was that of a long yellow-white cylindrical form that tapered to a point. The parasite was 45 mm in length and 0.5 mm in diameter. Pathology confirmed a female *Loa loa* worm.

The patient was then examined by an internist. Further history revealed that he was a native of Cameroon and had lived thcre until he was 10 years old. He thcn lived in France until age 23, when he immigrated to the US. He had not returned to Africa since his initial immigration. Further medical history, family history, review of systems, and physical examination were completely negative. Laboratory findings showed a white blood cell count of 3,100 cells per mL with 43% neutrophils, 38% lymphocytes, 5% monocytes, and 14% eosinophils. The hemoglobin level was 13.5 g/dL and hematocrit 39.9%. Erythrocyte sedimentation rate was 5 mm per hour. Results of tests for serum glucose, liver and renal functions, and electrolytes were normal. Urinalysis was normal. Knott test was negative for microfilariae. Prior to treatment, the Centers for Disease Control was consulted. Treatment was initiated with diethylcarbamazine in the following schedule: day 1, 50 mg; day 2, 50 mg three times daily; day 3, 100 mg three times daily; days 4 through 21, 150 mg three times daily. At the onset of treatment, the patient was givcn methylprednisolone, (Medrol Dosepak), to help prevent any side effects (the patient had none). After treatment, the white blood ccll count was 4,000 cells per mL with 63% neutrophils, 25% lymphocytes, 3% monocytes, and 9% eosinophils. Hemoglobin was 13.7 g/dL and hematocrit was 39.9%.

Discussion

Loiasis is infection by the filarial nematode *Loa loa*. The adult worms migrate through the subcutaneous tissues causing Calabar swellings in the skin.

EPIDEMIOLOGY

The threadlike, transluscent whitc worms are 30 to 70 mm in length and live in the subcutaneous tissues. The female releases up to 50,000 microfilariae (immature larvae) a day into the pcripheral blood. Worms are extremely long-lived, surviving 4 to 17 years. The vectors for *Loa loa* are species of the tabanid flies of the gcnus *Chrysops*. The disease distribution parallels that of its intermediate vector, which breeds in the rain forests of West and Central Africa.

PATHOLOGY

Clinically the disease is manifest as Calabar swellings which are egg-sized subcutaneous nodules, an immune response to antigenic material left by the worms. Other manifestations of disease are principally dermatologic and include subcutaneous and subconjuntival worms. There is no multiplication of worms in man so that worm load and severity of the disease is dependent on the number of infective larvae acquired. Endomyocardial fibrosis and nephrotic syndrome have been reported (1,2). Laboratory findings include eosinophilia, microfilariae on thick or concentrated blood films, and calcified worms visualized by x-ray. Microfilariae cannot be found in the blood of some patients, especially those chronically infected. Characteristic lymph nodc findings (3) and gastric cytology (4) have been describcd. Serologic tests may be useful in working up undiagnosed malaise and eosinophilia in travelers to endemic areas (5).

DIAGNOSIS

Historical findings include: residence (past or present) in, or travel to, endemic areas; transient local swellings; and fever, fatigue, and recurrent

arthralgias (6). Physical examination and laboratory findings are described above.

TREATMENT

Diethylcarbamazine (DEC) is the treatment of choice. It rapidly clears microfilariae and is slower acting on adult worms. It is given orally, and treatment schedules vary with the microfilarial load. Side effects (up to 70% of patients) are due to allergic reactions to the dead and dying worms and microfilariae. These are controlled with pretreatment steroids and antihistamines. The use of plasmapheresis to remove microfilariae in the blood and thus decrease the severity of side effects in patients with especially high microfilaria counts has been reported (7,8). More severe and rare side effects of therapy have been described, including congestive heart failure, ascending paralysis (9,10) and meningo-encephalitis which is associated with DEC therapy and high microfilaria counts.

Conclusion

A search of the literature found five other cases of *Loa loa* reported in this country since 1979 (11–15). All patients were either natives of or had traveled in endemic areas. This case raises two important points: It shows an unusually long time period between the exposure to and the clinical manifestation of this disease, and it emphasizes the importance of considering endemic diseases when evaluating common complaints in patients from other parts of the world, even if years have passed.

REFERENCES

1. Andy JJ, Bishara FF, Soyinka OO, et al: Loiasis as a possible trigger of African endomyocardial fibrosis: a case report from Nigeria. Acta Trop (Basel) 38(2):179–186, 1981.
2. Katner H, Beyt BE Jr, Krotoski WA: Loiasis and renal failure. South Med J 77(7):907–908, 1984.
3. Paleologo FP, Neafie RC, Connor DH: Lymphadenitis caused by Loa loa. Am J Trop Med Hyg 33(3):395–402, 1984.
4. Whitaker D, Reed WD, Shilkin KB: A case of filariasis diagnosed on gastric cytology. Pathology 12(3):483–486, 1980.
5. Muller R: Loiasis, in Strickland GT, (ed.): Hunter's Tropical Medicine, ed 6 Philadelphia, Saunders, 1984, p 665.
6. Gruntzig J, Gewalt W: Cameroon swelling; infection by the filaria Loa loa. Fortschr Med 97(42):1932–1937, 1979.
7. Muylle L, Taelman H, Moldenhauer R, et al: Usefulness of apheresis to extract microfilarias in management of loiasis. Brit Med J (Clin Res) 287(6391):519–520, 1983.
8. Saeed AA, Green PJ, Naoroz M, et al: Loa loa: the use of a blood cell separator to reduce microfilaraemia before specific chemotherapy. J Infect 9(2):161–166, 1984.
9. Terrence CF, Fromm G: Congestive heart failure during carbamazepine therapy. Ann Neurol 8(2):200–201, 1980.
10. Stanley SL Jr, Kell O: Ascending paralysis associated with diethylcarbamazine treatment of M. loa loa infection. Trop Doct 12(1):16–19, 1982.
11. Kazacos KR, Smith LE Jr: Loiasis (Loa loa) in an Africa Student in Indiana. Am J Trop Med Hyg 28(2): 213–215, 1979.
12. Ruben FL, Hines SL, Williams SL, et al: Loiasis in an American naturalist. Am J Trop Med Hyg 32(4):738–740, 1983.
13. Geldelman D, Blumberg R, Sadun A: Ocular Loa loa with cryoprobe extraction of subconjunctival worm. Ophthalmology 91(3):300–303, 1984.
14. Lee BY, McMillian R: Loa loa: ocular filariasis in an African student in Missouri. Ann Ophthalmol 16(5):456–458, 1984.
15. Farrer WE, Wittner M, Tanowitz HB: African eye worm (*Loa loa*) in a tourist. Ann Ophthalmol 13(10):1177–1179, 1981.

WALLACE W. MARSH, MD

MARY EBERLE, MD

Curanderismo associated with fatal outcome in a child with leukemia

Wallace W. Marsh, MD, Department of Pediatrics, and Mary Eberle, MD, Department of Pathology, School of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

A 12-year-old Mexican-American girl died with a malignancy after a six-month course of treatment at home with folk medicines by a curandera. *During the period of treatment the patient's condition gradually deteriorated. She was brought to a hospital in cardiac arrest. Her bone marrow biopsy and autopsy showed acute lymphocytic leukemia. A discussion of the Mexican-American folk beliefs, which affected this family's utilization of medical facilities, follows the case report.*

Members of various minority groups have beliefs and customs concerning medical illness that are widely disparate from those of mainstream medical practice. These beliefs may influence whether standard medical resources are accepted or rejected by a patient and his family (1–3). What follows is a case of a Mexican-American child who died after a prolonged course of a malignancy, how her family's folk beliefs affected their utilization of health care resources, and how these beliefs might have affected her outcome.

Case report

The patient was a 12-year-old Mexican-American girl whose family was, and still is, living in a city with a population of 180,000. The medical resources of this population include 28 pediatricians, seven hospitals, and a medical school with a teaching hospital, including a pediatric oncologist. The patient was a healthy child who first began to feel ill six months before admission. Her initial complaints were morning nausea, decreased appetite, and a decrease in stool frequency. Her grandmother, a *curandero* (folk healer), who was highly respected in the city's Mexican-American community, diagnosed her at that time as having *empacho* ("blocked intestine disease") and began treating her at home with *manzanilla* (chamomile tea, a tea of the flower heads of *Anthemis noblis* used for cough, colic, and as a stomach tonic). Five months before admission, she was seen by a physician who diagnosed "anemia" after determining her hematocrit level. The physician urged additional laboratory tests, but because of the family's cultural belief that drawing blood weakens the body, these tests were not obtained, and the family did not seek further medical care. Instead, the child remained at home, despite progressive weakness and weight loss, and continued to be treated with medicinal teas. About two weeks prior to admission, the patient began to vomit a coffee-colored substance at least once a day. The mother wasn't aware of the color of the patient's stools. One week prior to admission, the mother noted bruises and purple lesions over the child's extremities. On the day of admission, the family was gathered and a priest was called because they felt the child was dying and this was "God's will." The priest quickly administered last rites and called the county emergency medical services. The patient arrived at the emergency room in full cardiorespiratory arrest. She was resuscitated and admitted to the Pediatrics Intensive Care unit.

The admission physical examination revealed an emaciated, pale Latin-American girl whose vital signs were: rectal temperature 96.8° F (36° C), blood pressure 60/10 mm Hg, pulse 300 beats/min. Initial laboratory results showed a total white count of 18,000 with no neutrophils, 1% bands, 20% lymphocytes, 78% blasts, and 1% monocytes; hematocrit of 3.7%; hemoglobin of 1.3 gm; and a platelet count of 24,000. The rest of her laboratory studies demonstrated partial thromboplastin time 57.5 sec, prothrombin time 19.4 sec, sodium 133 mEq/L, potassium 8 mEq/L, chlorides 92 mEq/L, carbon dioxide 7 mEq/L, blood urea nitrogen 19 mg/100 mL, creatine 1 mg/100 mL, ammonia 412 mg/100 mL, total protein 4.6 gm/100 mL, albumin 2.1 gm/100 mL. Hospital management consisted of transfusions with fresh frozen plasma, platelets, and packed red blood cells; dopamine drip for shock; intravenous antibiotics (Cefuroxamine 100 mg/kg/day); full ventilatory support; and multiple rounds of cardiac drugs. Despite these measures the patient died five hours after admission.

PATHOLOGY

A bone marrow clot and biopsy obtained shortly before death showed a small round cell infiltrate replacing the marrow; these cells were PAS and Sudan Black B negative. The Wright-Giemsa stained bone marrow slides were evaluated according to the French-American-British Co-operative Group (FAB) Classification and met the criteria for L, morphologic classification. Review of the peripheral blood revealed that many of the circulating blasts had a lymphoid appearance. They were of variable size, with very high nuclear-to-cytoplasmic ratio, folded nuclear contours, and occasional nucleoli (Fig 1). No cytoplasmic granules were present.

An autopsy performed the following day revealed the following: The body was that of a 70 lb (31.8 kg), 5-ft (152 cm) female. The most striking gross finding was the presence of generalized lymphadenopathy, with multiple lymph nodes measuring up to 2.5 cm in diameter throughout the body. A 2 x 2-cm cutaneous nodule over the right eyebrow and a 3 x 2-cm indurated lesion on the left labium minorum were also noted. The spleen weighed 360 gm (twice normal size). Histologic sections taken from lymph nodes, bone marrow, spleen, and the vulvar skin lesion revealed a flooding and replacement of these tissues by small lymphocytic cells exhibiting irregular nuclear contours and a slightly

vesicular chromatin pattern with small inconspicuous nucleoli. Focal infiltrates of the same abnormal cells were found in the heart, liver, kidneys, and stomach. The meninges were free of any infiltrate. Based on cell morphology, it was felt that this case represented acute lymphoblastic leukemia with L_1 morphologic characteristics. Studies of T and B cell markers were not available for further characterization of this leukemia.

Discussion

The system of folk beliefs of the Mexican-American culture which impacted on this patient is called *curanderismo*. These beliefs reflect the interweaving of Spanish Catholicism with indigenous Mexican-Indian culture. The elements of *curanderismo* are: belief in individual strengths and weaknesses, mystical causation of disease such as fate or destiny, *susto* (soul loss), or *mal de ojo* (evil eye), "naturalistic" folk conditions such as *caida de mollera* (collapsed fontanelle) and *empacho* (blocked intestine), magical causes of disease such as *mal puesto* (hexing), and use of brewed medicinal herb teas in treatment (5).

Mexican-American folk healers are called *curanderos*. Most of these are older women (like the grandmother in this case) who perceive their "calling" as divine will. The healing process involves prayers, healing rituals, and herbal medicines. Religious faith is an important element in this healing process, not only the faith of the healer, but also the strength of the faith of the patient and the patient's family (6). In this case, the family believed themselves to be very religious and felt that a cure would come if they only kept praying and believing. When it did not work, they accepted the outcome as being "God's will" or due to *susto* (lost soul).

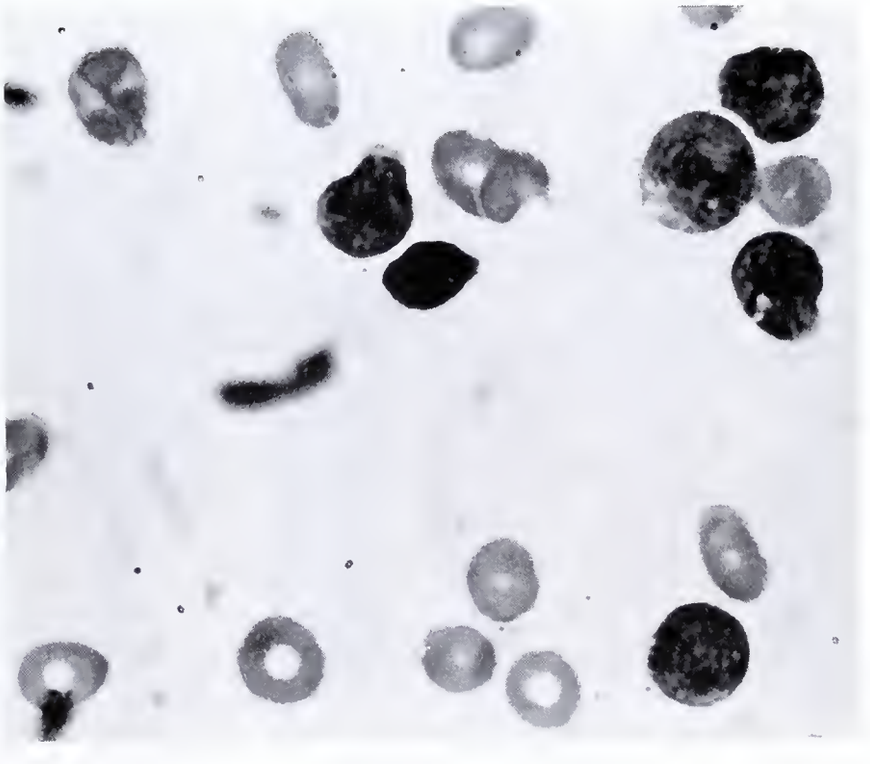
Among the cultural beliefs that played a role in this case was the belief that a good doctor knows the diagnosis at the first visit (7). Hence the family was more likely to accept the *curandero* grandmother's immediate diagnosis of *empacho* rather than the judgment of the physician who requested further tests. Also, it is commonly believed by many Mexican-Americans that drawing blood weakens the patient, and since the patient was already weak (even before her illness, she was believed to be weaker than her siblings), they did not have the requested laboratory work done. The family's perception of hospitals was that they are hostile places where one goes to die; one needs to be surrounded by family members during an illness (6). This was why this patient was taken to a hospital only in the terminal stage, after "last rites" were performed.

The folk medicine in this case *(manzanilla)* is essentially harmless but other Mexican-American folk remedies for empacho such as *azarcon* (an orange powder which contains 86% lead tetroxide) or *greta* (another lead containing compound), can cause lead poisoning (8,9).

In previous studies of Mexican-American populations, it has been shown that 90% of the members of this subcultural group believed in or used folk medicine to some extent, while only 50% of the physicians who served large numbers of Mexican-American patients were aware of their patient's folk beliefs (10).

The strength of folk beliefs, and the degree of adherence to them, varies among the Mexican-American population. Studies have shown that patients who are less educated, have the lowest standard of living, and speak only Spanish have the strongest reliance on these practices (6). When physicians are confronted with Mexican-American patients, especially those from lower socioeconomic groups, they should be aware of the existence of folk beliefs and how these beliefs might affect the proposed diagnostic and treatment plan (11). Possibly with open discussion and incorporation of the family's harmless practices into the overall patient care plan, conflicts with the family might be avoided. This in turn may result in better compliance with the prescribed medical treatment. In the case presented above, the initial physician was never aware of the family's folk beliefs.

In the case reported here, even though the exact cell type of the patient's leukemia was never determined, the FAB morphological cell classification of L_1, which the patient's bone marrow stain exhibited,



1. Five leukemic cells are seen in this field of the peripheral smear.

is associated with an overall survival rate of 50%, with variation of cell types with L_1 morphology varying from 40% to 70% (12). There was, therefore, a high probability of cure for the patient, had she been diagnosed earlier and received appropriate chemotherapy. Even if her leukemia had not been cured, timely treatment would have prolonged her survival and improved her quality of life.

REFERENCES

1. Oberg CN, Deinard A: Marasmus in a 17-month-old Laotian: impact of folk beliefs on health. Pediatrics 73(2):254–257, 1984.

2. Snow LF: Folk medical beliefs and their implications for care of patients. A review based on studies among black Americans. Ann Intern Med 81(1):82–96, 1974.

3. Tripp-Reimer T: Retention of a folk-healing practice (matiasma) among four generations of urban Greek immigrants. Nurs Res 32(2):97–101, 1983.

4. Bennett J, Catovsky D, Daniel MT, et al: The morphological classification of acute lymphoblastic leukemia: concordance among observers and clinical correlations. Br J Haematol 47(4):553–561, 1981.

5. Ness RC, Wintrob RM: Folk healing: a description and synthesis. Am J Psychiatry 138(11):1477–1481, 1981.

6. O'Brien ME: Reaching the migrant worker. Am J Nurs 83(6):895–897, 1983.

7. Deyo RA: Pitfalls in measuring the health status of Mexican-Americans: comparative validity of the English and Spanish Sickness Impact Profile. Am J Public Health 74(6):569–573, 1984.

8. Bose A, Vashistha K, O'Loughlin BJ: Azarcon por empacho—another cause of lead toxicity. Pediatrics 72(1):106–108, 1983.

9. Leads from the MMWR. Lead poisoning from Mexican folk remedies—California. JAMA 250(23):3149, 1983.

10. Mull JD, Mull DS: Residents' awareness of folk medicine beliefs of their Mexican patients. J Med Educ 56(6):520–522, 1981.

11. Korbin JE, Johnston M: Steps toward resolving cultural conflict in a pediatric hospital. Clin Pediatr (Phila) 21(5):259–263, 1982.

12. van Eys J, Pullen J, Head D, et al: The French-American-British (FAB) classification of leukemia. The Pediatric Oncology Group experience with lymphocytic leukemia. Cancer 57(5):1046–1051, 1986.

To show you how many hypertensives stayed on INDERAL® LA (PROPRANOLOL HCl) after a major nationwide trial...

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL® LA stayed on INDERAL LA.[1*]

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.
A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were controlled merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General.* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. bradycardia, congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System. lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal. nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic. agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia. LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985;145:1321-1323.

6412/187

Ayerst® AYERST LABORATORIES
New York, NY 10017

© 1986 Ayerst Laboratories

Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the original hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. 5685

1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med,* 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

© 1986, BASF K&F Corporation

5768/9-86 Printed in U.S.A.

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

ALAN H. LOCKWOOD, MD

Nuclear weapons and nuclear war: implications for Texas physicians

The immediate consequences of a nuclear war, once thought for only a few, have been brought to the attention of virtually all thoughtful individuals in recent years, due in part to the efforts of physicians. In 1985 the Nobel Prize Committee recognized the efforts of physicians working toward the prevention of nuclear war by awarding the Peace Prize to International Physicians for the Prevention of Nuclear War. This paper presents an analysis of the effects of a nuclear attack on the United States, the special implications this would have for Texans, and a summary of the role physicians are taking in preventing nuclear war.

As of July 1, 1982, Texas claimed the third largest state population, with an estimated population of 15.3 million, an increase of 1.05 million in the preceding 27 months (1). Although it is vast, Texas ranks 11th in the degree of urbanization, with 79% of the population living in urban areas: 73% of all Texans live in one of 28 primary metropolitan statistical areas (1). In spite of its urbanization, Texas is the third leading agricultural state, with cash receipts of $35 billion in 1982 (1). Livestock sales, second in the nation, account for 54% of this total, and crops the remainder (fourth in the nation) (1). Texas also contains 56 military installations (2), the Department of Energy nuclear weapon assembly plant (producing all nuclear weapons for the United States), and the Johnson Space Center, just south of Houston. Texas also leads the nation in oil and natural gas production, accounting for about one third of all production and 27% of all refining capacity (1). These data clearly indicate the importance of the state as a potential target in a nuclear attack directed against population centers, military installations, or the critical petroleum industry.

Damage from a nuclear attack occurs as a consequence of blast, thermal, and radiation energy, accounting for 50%, 35%, and 15% of the energy yield (3). (These ratios can be altered by differences in weapon design). The Office of Technology Assessment indicates that a typical 1 megaton (MT) ground explosion (equivalent to the explosion of 1 million tons of TNT) produces a fireball 1 mile in diameter that persists for 10 sec with temperatures of 20 million degrees Fahrenheit, leaving a crater 1,000 feet in diameter and 200 feet deep (3,4). The peak excess air pressure, or overpressure, would be 20 psi at a distance of 0.8 miles from the explosion where winds would reach 470 mph, completely destroying all reinforced concrete structures. Within the 12 psi overpressure zone, 98% of the population would be killed. At a distance 4.4 miles from ground zero, the overpressure would be 5 psi, winds would be 160 mph, sufficient to destroy commercial buildings and homes. An air burst of a 1 MT bomb would cause second-degree burns on exposed body surfaces at a distance of 10 miles, producing many thousands of burn victims in large cities.

The *1983 Texas Medical Facilities Inventory* listed 69,943 licensed beds in 562 hospitals that provided 15.6 million hospital-days of patient care (5). Typically hospitals are in or near the centers of urban areas, and are thus highly vulnerable to the effects of blast and fire. The same is true for health care professionals. In the period immediately after attack, survivors would be unlikely to find any form of health care, and the expected surviving physician-to-patient ratios would be on the order of 1:1,000 (6).

The emergence of data predicting a "nuclear winter" after a nuclear attack makes the prospect for survival even more remote. According to the original report, a nuclear attack of 100 megatons, only 0.8% of the total nuclear arsenal of the two superpowers, directed against cities, where fuel densities are high, would have nearly the same consequences as a 5,000 megaton attack: both would cause temperatures to plummet to below -20° C for several weeks (7). Similar data have been published by Soviet meteorologists (8). This implies that the threshold for producing nuclear winter and associated severe impacts on civilization may be achieved during "limited" nuclear wars. The data describing the immediate consequences of a nuclear attack on cities, testimony by physicians concerning medical aspects of civil defense effectiveness (9), and nuclear winter data led to the decision by the Federal Emergency Management Agency to abandon crisis relocation and passive civil defense as strategies to protect the population (10).

The ecosystem after attack would be severely disrupted by the combined effects of blast, fire, radiation, darkness, and cold (7,8,11). This would have profound effects on Texas as well for, depending on the time of the year, most crops would be destroyed and many native plant species would face extinction. Rapid temperature drops would kill plants that ordinarily tolerate low temperatures, since there would be no time for natural temperature adaptation processes to take place (11). Depletion of the ozone layer would not only subject animals to the harmful effects of increased ultraviolet radiation flux, but would have adverse effects on many plants as well, since many species already exist at the upper limit of their natural ultraviolet light tolerance (11).

After an attack, Texas, a urbanized state, would experience near total destruction of most metropolitan areas by blast and fires, contamination of large portions of the state by lethal levels of radio-

Alan H. Lockwood, MD, Department of Neurology and Positron Diagnostic and Research Center, The University of Texas Health Science Center, PO Box 20708, Houston, TX 77025. Dr Lockwood is a member of Physicians for Social Responsibility.

active fallout (an effect that would be increased if nuclear power plants and the Pantex nuclear weapons assembly plant and its presumed stockpile of plutonium were attacked), and nuclear winter. This makes the prospect for survival seem remote at best. Even though *all* human life might not be destroyed, this is possible (11). Certainly civilization as we know it would no longer exist.

Physicians and nuclear war prevention

Physicians have traditionally concerned themselves with events that are characterized by widespread death and disease. Nuclear war is no exception. Physicians have applied the same logic to contemplating nuclear war that has been applied to diseases for which there are no satisfactory treatments. In the case of smallpox, complete eradication has been achieved by preventive measures in the form of vaccination. Conditions without treatment must be prevented. Since nuclear war would be associated with mass casualties and no prospect for meaningful delivery of even rudimentary health care, prevention via education has been sought. The important role that physicians have played in this process was recognized in 1985 when the Nobel Prize Committee awarded the Peace Prize to International Physicians for Prevention of Nuclear War, an international organization whose American affiliate is Physicians for Social Responsibility. The Nobel Committee stated, "This organization has performed a considerable service to mankind by spreading authoritative information and creating an awareness of the catastrophic consequences of atomic warfare."

Plenary sessions discussing the medical aspects of nuclear war have been or will be presented at meetings of the American Public Health Association, the American Psychiatric Association, the American Geriatric Society, the American Academy of Rehabilitative Medicine, and the Texas Medical Association. The Aug 2, 1985, issue of the *Journal of the American Medical Association* was devoted to medical considerations of the bombings of Hiroshima and Nagasaki, and a new journal, *Medicine and War*, has been created as a forum in which these issues can be expressed within the medical profession.

Since the threat of nuclear war is considered by many physicians to be the most important public health problem we face today, the scope of physician involvement has expanded beyond an analysis of the immediate casualties of a nuclear attack to include many contemporary issues, including the need for a comprehensive test ban treaty and an analysis of the psychological factors behind the arms race (12), including factors leading to the complete reversal of the US policy on ballistic missile defense and the proposed Strategic Defense Initiative known popularly as "Star Wars." Physicians have also analyzed the impact of the worldwide arms race on health care delivery in the United States and third world countries (13).

The decisions we make on the important issues we are facing will affect the future of the United States and the world. As physicians, we have a unique and important perspective on many of these problems that is the result of our medical training. Facing these responsibilities and applying our medical expertise to the task of seeking solutions that are in the best interest of all humanity is no less a part of our medical responsibility than the care of the next person who enters our office.

REFERENCES

1. Kingston MT, Harris R (eds): 1984–1985 Texas Almanac and Industrial Guide. Dallas, H. A. Belo, 1983.

2. Department of Defense, List of All Military Installations, FY 1982.

3. Glasstone S, Dolan PJ (eds): Effects of Nuclear Weapons, ed 3. Washington, DC, US Department of Defense and Department of Energy, 1977.

4. The Effects of Nuclear War. Office of Technology Assessment, 1979.

5. Texas Medical Facilities and Utilization: Calendar Year 1983. Austin, Tex, Texas Department of Public Health.

6. Sidel VW, Geiger HJ, Lown B: The medical consequences of thermonuclear war II: the physician's role in the postattack period. New Engl J Med 266:1137–1145, 1962.

7. Turco RP, Toon OB, Ackerman TP, et al: Nuclear winter: global consequences of multiple nuclear explosions. Science 222:1283–1292, 1983.

8. Alexandrov VV, Stenchikov GL: On the modelling of the climatic consequences of the nuclear war. Proceeding on Applied Mathematics, Computing Center of the AS USSR, Moscow, The USSR Academy of Sciences, 1983.

9. Leaning J: Civil Defense in the Nuclear Age. Washington, DC, Physicians for Social Responsibility, 1982.

10. Guiffrida LO: Fiscal Year 1986 Civil Defense Program. Testimony before Subcommittee on Military Installations and Facilities, Committee on Armed Services, House of Representatives, March 6, 1985.

11. Ehrlich PR, Harte J, Harwell MA, et al: Long-term biological consequences of nuclear war. Science 222:1293–1300, 1983.

12. Frank JD: Sanity and Survival in the Nuclear Age, ed 2. New York, Random House, 1982.

13. Sidel VW: The health and social costs of the weapons race. Mobius 4(1):56–66, 1984.

ADDENDUM

Since the acceptance of this paper for publication, additional data describing medical consequences of nuclear war have been published by the National Academy of Science, Institute of Medicine (1). Four major findings are worthy of mention. Earlier estimates of the number of deaths due to nuclear explosions assumed that blast energy would be the primary cause of death. New studies, stimulated by predictions of nuclear winter caused by urban fires,

predict that the blast model underestimates total deaths by as much as a factor of four when compared with a model that includes deaths from urban superfires.

Re-analysis of the Hiroshima data suggests that the lethal dose of radiation for 50% of the population may be 225 rads, rather than the more generally accepted figure of 400–450 rads, when the synergistic effects of injuries, burns, starvation, and stress (all likely to exist in the post-attack period) are considered. The combined effects of stress, radiation, and ultraviolet radiation are also likely to impair the immunological system of survivors to produce an AIDS-like state and attendant deaths due to opportunistic infections.

Finally, and perhaps most importantly, widespread crop failure will almost certainly follow even modest predictions of the environmental effects of nuclear winter, creating a global famine that could kill as many as 4 billion people within a year of a nuclear war. This comprehensive and sobering report underscores the urgency of active nuclear war prevention activities by physicians.

REFERENCES

1. Institute of Medicine: *The Medical Implications of Nuclear War.* Washington, DC, National Academy Press, 1986.

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

ROCHE®

BECAUSE ONLY VALIUM

2 mg 5 mg 10 mg

IS ALWAYS VALIUM®

brand of diazepam/Roche®

REMEMBER TO WRITE "DO NOT SUBSTITUTE."
IT'S THE ONE YOU KNOW BEST.

Copyright © 1987 by Roche Products Inc. All rights reserved.

The cut out "V" design is a registered trademark of Roche Products Inc.

CLAYTON D. K. CHONG, MD

Bladder cancer: management of advanced disease

Until recently, advanced bladder cancer was a universally fatal disease. Through extensive single-agent and combination chemotherapy drug trials, transitional cell carcinoma of the bladder has been shown to be a chemosensitive tumor. Recent combination chemotherapies (CMV, M-VAC, CISCA) have produced exciting responses in advanced disease. Durable complete responses have been reported in local regional (Stage D_1) disease. This paper summarizes the current status of chemotherapy in the treatment of advanced bladder cancer and the M. D. Anderson Hospital experience.

Bladder cancer accounts for 2% of all malignancies in adults. It is three to four times more common in men than in women, and peak incidence occurs in the sixth decade. Each year there are 40,000 new cases diagnosed and 10,800 deaths from this disease (1). At the time of diagnosis, 15% of cases are found to be invasive cancer, and tumors in 15% of the remaining patients will eventually progress in grade and stage to invasive disease (2,3).

Bladder cancer includes a heterogeneous group of tumors with the capacity to recur, transform histologically, and metastasize. Transitional cell carcinoma is the predominant histological type, accounting for 90% of all urothelial tumors. The remaining histological types are squamous carcinoma and adenocarcinoma (8% and 2%, respectively) (4). Combinations of transitional cell carcinoma with squamous carcinoma or adenocarcinoma are occasionally found. These combinations are manifestations of transformation of the transitional cell type. Urothelial tumors may be found wherever this specialized endothelium exists (the bladder, ureters, renal pelvis, proximal urethra in the female and prostatic urethra in the male). This report focuses on transitional cell carcinoma of the bladder and management of its invasive form.

Staging

Staging is generally based on the criteria of Jewett-Strong and Marshall in the United States and of the TNM (tumor-node-metastasis) system (UICC), or (Union International Contre le Cancer) in Europe (Fig 1). Unfortunately, staging errors are frequent for deep penetrating (B_2) and large tumors (T3) where locally advanced (C,D) or metastatic nodal disease (D_1) was found in 50% of cases (5). The recent application of computerized tomographic techniques in this area has not increased the accuracy of clinical (as compared to pathologic) staging. Staging accuracy is limited by the presence of inflammation, multiplicity of tumors, previous transurethral surgery, prior radiotherapy, and site of tumor involvement.

Natural history

Progression of superficial bladder cancer in grade and stage is variable. The National Bladder Cancer Collaborative Group has identified five predictive factors of progressive disease: higher stages (A, B); more aggressive grades (II, III); tumors greater than 5 cm in diameter; more than four sites of tumor at initial presentation; and dysplasia at initial presentation (6).

Other factors have been associated with advanced disease or progression of superficial disease. The loss of ABO blood antigen from tumor cell surfaces and the presence of marker chromosome abnormalities in superficial bladder cancer are associated with the development of a more agressive and invasive disease. These tests, however, have not received wide utilization because of the difficulty of performing these studies. Elevation of serum carcinoembryonic antigen levels has been found with advanced bladder cancer (7). Previous studies suggest that serum carcinoembryonic antigen may be a useful marker for advanced bladder cancer (7), but others have not confirmed this (8). In our experience, changes in serum carcinoembryonic antigen levels often correlate to progression of or response to therapy in these tumors (9).

Management

Advanced disease (stage D or T4, N1-4, M1 lesions) and its therapeutic management will be the main focus of this paper. Stage D_1 disease has an overall five-year survival rate of 16% (2,4). When macroscopic stage D_1 tumors are found at the time of cycstectomy, a one-year mortality rate of 40% is noted, and the median time to recurrence is four to five months (5). Extensive stage D_1 disease (unresectable, locally extensive bladder cancer) has a 25% one-year survival (median survival of five to six months). This prognosis is worse when there is involvement of adjacent organs (prostate, rectum, vagina). In stage D_2 disease, five-year survivals have yet to be achieved with any form of treatment (4). The role of surgery in advanced disease is purely palliative (for control of hemorrhage or for urinary diversion). Radiation therapy is capable of eradicating low-volume local disease (stage D_1); however, only a few patients (less than 10%) are cured by this modality alone (10). Radiation therapy may be of benefit in managing hemorrhage or local irritative symptoms; however, the latter are more often exacerbated by radiation therapy. Thus, the primary management of advanced bladder cancer is through a systemic chemotherapeutic approach. Several multiphase I and II trials have established that bladder cancer is a chemotherapeutically responsive tu-

Clayton D. K. Chong, MD, Section of Genitourinary Oncology, Department of Medical Oncology, The University of Texas M. D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, TX 77030.

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

mor. Several studies have also shown that patients with transitional cell carcinoma histologies have responses in all sites of urothelial origin (renal pelvis, bladder, ureter, urethra, or prostatic ducts) (4,5,11–13). The published differences in responses may be due, in part, to differences in drug dose and schedule and to the variability of response evaluation.

Single-agent chemotherapy

Cisplatin has been found to be the most active drug for transitional cell carcinoma. Responses in the range of 20% to 50% are noted with this agent alone (11). Platinum analogues (carboplatin, iproplatin) are currently undergoing evaluation; preliminary reports suggest a 25% response rate to carboplatin (12). Methotrexate has been used in a variety of schedules, but the optimal dose has not been defined. At doses of 30 to 40 mg/m^2 weekly, without citrovorum factor rescue, methotrexate has yielded a 23% to 35% response rate, with more partial remissions than complete remissions and a median duration of response of approximately five months (13). The methotrexate analogue 10-deazaaminopterin is currently undergoing evaluation. Adriamycin (doxorubicin HCl) has yielded response rates of 20% to 35%, with a response duration of approximately three to four months. *Vinca* alkaloids have yielded response rates of 10% to 27%. Response rates in the range of 10% to 30% have been achieved in various clinical trials of other active agents such as mitomycin C, cyclophosphamide, 5-fluorouracil, M-AMSA, and VM-26. Responses to single agents are summarized in Fig 2.

Combination chemotherapy

Multidrug regimens have been evaluated once the activity of single agents in bladder cancer was established. Combinations such as Adriamycin plus 5-fluorouracil have yielded a slight increase in responses over Adriamycin as a single agent. In three separate studies involving a total of 103 patients, the response to this combination was shown to be in the range of 40% (11). Cisplatin combinations have been studied extensively. Cisplatin plus cyclophosphamide proved to be no more effective than cisplatin alone. However, cisplatin plus Adriamycin has shown an increased response rate in the range of 35% to 58% (13). Triple drug combinations of cisplatin, Adriamycin, and cyclophosphamide have achieved response rates in the range of 40% to 90%. In the summarized trials of 202 cases, the mean response to this three-drug combination approached 46% (5). These responses were found to be greater in patients without prior radiation therapy (44%) than in patients with radiation therapy (24%). Responders to this treatment were found to have a longer survival (91 weeks) than did nonresponders (38 weeks). At The University of Texas M. D. Anderson Hospital, high-dose cisplatin, Adriamycin, and cyclophosphamide (CISCA) chemotherapy has yielded a 68% overall response rate, a 50% complete remission rate, and a median disease-free survival of 86 weeks (33 to 172 weeks) in a study of 38 patients (14). Complete responses were found only with locally advanced nodal disease (stage D_1) whereas objective responses (responses less than a complete response) were found in extensive advanced nodal (stage D_2) and in visceral metastatic disease. Fig 3 demonstrates Kaplan-Meier survival curves where a significant survival advantage emerged when comparing the complete responders over the objective responders and nonresponders after treatment with the CISCA regimen. Overall survival did not improve significantly for objective responders as compared to nonresponders. This chemotherapy combination is currently the front-line regimen at The University of Texas M. D. Anderson Hospital for transitional cell carcinoma of the urothelium. The toxicity of the CISCA regimen is moderate, with peripheral neuropathy and leukopenic infections the most common complications. No deaths from chemotherapy were encountered. CISCA chemotherapy consists of cyclophosphamide at 650 mg/m^2 on day 1, Adriamycin at 50–60 mg/m^2 on day 1, and cisplatin on day 2, at 100 mg/m^2 for patients with two functioning kidneys and at 75 mg/m^2 for those with creatinine clearance less than 60 but greater than 40 mL/minute.

Methotrexate combinations are currently being evaluated in multiple nonrandomized trials. In previous studies, methotrexate, Adriamycin and cyclophosphamide in combination yielded response rates of 37% which is similar to results with methotrexate alone (5,11,12). In one trial of 16 patients, methotrexate and mitomycin achieved a 31% response rate; in another trial, methotrexate and vinblastine yielded a response rate of 38% (12).

The combination of methotrexate and cisplatin

1. Bladder cancer staging systems.

Pathologic Extent	Jewett-Strong Marshall	*UICC (TNM)
Superficial		
Carcinoma in situ	0	Tis
Papillary tumor confined to mucosa	0	Ta
Submucosal invasion	A	T1
Superficial muscle invasion	B_1	T2
Deep		
Deep muscle invasion	B_2	T3a
Perivesical fat involvement	C	T3b
Adjacent organ invasion	D	T4
Pelvic lymph node involvement	D_1	N1-3
Extrapelvic lymph node or distant visceral organ involvement	D_2	N4-M1

*Union International Contre le Cancer tumor-node-metastasis staging system.

has recently been shown to produce a high response rate. The sequencing of these two drugs has not thoroughly been established. In a European study of methotrexate and cisplatin in 11 patients, there was a 64% response (5). Other combinations including cisplatin, methotrexate, and other agents have been shown to yield higher response rates. Hacker and colleagues with a combination of cisplatin, methotrexate, and vinblastine (CMV) showed a 56% response rate (28% complete response rate) (15). With the methotrexate, vinblastine, Adriamycin, and cisplatin (M-VAC) combination, Sternberg et al at Memorial Sloan-Kettering Cancer Center in New York have reported a 67% response rate in the first 45 patients, with a 40% complete remission rate (16). Combination agent responses are summarized in Fig 4.

Advanced bladder cancer is a chemotherapeutically responsive tumor, and the recent combination regimens (CISCA, M-VAC, CMV) are yielding high response rates with complete remissions. At The University of Texas M. D. Anderson Hospital, an ongoing randomized trial is comparing CISCA and M-VAC; the report of this comparison may answer some questions about synergism of different combinations and may suggest alterations in those combinations to obtain increased chemotherapeutic responses.

Adjuvant chemotherapy

Until recently, bladder cancer therapy was confined to the pelvis and consisted of surgery, radiotherapy, or a combination of these two modalities. Despite a high rate of control of local disease, 66% of patients so treated will die of metastatic disease. One must conclude that bladder cancer is a systemic disease of micrometastatic spread requiring systemic therapy. In light of recent studies revealing bladder cancer to be chemosensitive, adjuvant chemotherapy can play an important role in therapy of early bladder cancer.

At The University of Texas M. D. Anderson Hospital, adjuvant chemotherapy is currently used in some cases of advanced bladder carcinoma. Patients considered to be at high risk for postoperative relapse following cystectomy are candidates for this adjuvant therapy. Risk factors are stage B lesions with lymphatic permeation, extravesical invasion, and invasion of nodes or pelvic viscera. These high-risk patients receive five courses of CISCA chemotherapy (cyclophosphamide, 500 mg/m^2; Adriamycin, 50 mg/m^2; cisplatin, 100 mg/m^2) after recovery from cystectomy. Preliminary data have shown that completion of this adjuvant chemotherapy program yields a significant increase in disease-free survival in high-risk patients (79 weeks versus 50 weeks in those at high risk not given adjuvant CISCA) (17). Survival of high-risk patients receiving adjuvant chemotherapy is identical to that of low-risk patients not receiving adjuvant therapy. Ongoing accrual of patients given adjuvant therapy and further analysis of the resulting data will shed more light on the benefits of this approach. Currently, several ongoing adjuvant therapy trials have been instituted, although the data are not yet available for evaluation.

Conclusion

Advanced transitional cell carcinoma of the bladder is a chemotherapeutically responsive tumor. Recent combination chemotherapy has yielded high response rates, with durable responses noted. With

2. Single-agent activity in advanced bladder carcinoma.

Drug	Range of Responses (%)
Cyclophosphamide	20–40
Adriamycin	20–35
5-fluorouracil	25–45
Methotrexate	23–35
Mitomycin C	16–33
Cisplatin	20–50
Vinca alkaloids	10–27

3. Comparison of survival times of patients receiving CISCA chemotherapy for advanced urothelial cancer.

Survival Function	Number of Patients (%)
Complete remission	19 (50)
Objective response	7 (18)
No response	12 (32)

4. Activity of combination chemotherapy in advanced bladder cancer.

Regimen	No. of Patients	Response (%) Overall	Response (%) Complete/Partial
Cisplatin/Adriamycin/cyclophosphamide	202*	46	
Cyclophosphamide/cisplatin	79*	24	
Cisplatin/Adriamycin	62*	45	
Adriamycin/5-fluorouracil	103*	40	
Cisplatin/Adriamycin/cyclophosphamide (CISCA)	38	64	50/—
Cisplatin/methotrexate/vinblastine (CMV)	50	56	28/28
Methotrexate/vinblastine/Adriamycin/cisplatin (M-VAC)	45	67	40/27

*Total from summarized trials. Response value is mean.

low-volume metastatic disease (stage D_1), complete response rates with durable remissions have been achieved. This finding led us to investigate chemotherapy as adjuvant therapy; in that role following cystectomy it yielded a significant increase in disease-free survival for patients at high-risk for postoperative relapse. Chemotherapy in advanced bladder cancer is now being widely investigated and much improved response rates are anticipated.

REFERENCES

1. Silverberg E: Cancer statistics, 1985. CA 35(1):19–35, 1985.

2. Johnson DE, Boileau MA: Bladder cancer overview, in Johnson DE, Boileau MA (eds): Genitourinary Tumors: Fundamental Principles and Surgical Techniques. Grune and Stratton, New York, 1982, pp 399–447.

3. Williams JL, Hammonds JC, Saunders N: T1 bladder tumors. Br J Urol 49(7):663–668, 1977.

4. Richie JP, Shipley WV, Yagoda A: Bladder cancer, in DeVita VT Jr, Hellman S, Rosenberg SA (eds): Cancer, Principles and Practice of Oncology, ed 2. Philadelphia, J. B. Lippincott, 1984, pp 915–928.

5. Yagoda A: Chemotherapy for advanced urothelial tract cancer. Clinical Cancer Briefs 6(6):13–24, 1984.

6. Heney NM, Ahmed S, Flanagan MJ, et al: Superficial bladder cancer: progression and recurrence. J Urol 130(6):1083–1086, 1983.

7. Wahren B, Edsmyr F: Carcinoembryonic antigen in serum, urine and cells of patients with bladder carcinoma. Urol Res 6(4):221–224, 1978.

8. Fraser RA, Ravry MJ, Segura JW, et al: Clinical evaluation of urinary and serum carcinoembryonic antigen in bladder cancer. J Urol 114(2):226–229, 1975.

9. Dexeus F, Logothetis C, Samuels M, et al: Carcinoembryonic antigen (CEA) and beta subunit of human chorionic gonadotropin (BETAHCG) as serum markers in urothelial malignancies (meeting abstract). Proc Am Soc Clin Oncol 4:109, 1985.

10. Rafla S, Youssef E: Role of radiotherapy in treatment of bladder cancer, in Nasser Javadpour (ed): Bladder Cancer. Baltimore, Williams and Wilkins, 1984, pp 159–177.

11. Yagoda A: Progress in chemotherapy for cancers of the urothelium. Urology 23(Suppl 4):118–123, 1984.

12. Yagoda A: Chemotherapy for advanced urothelial cancer. Semin Urol 1(1):60–74, 1983.

13. Torti FM, Harker WG: Chemotherapy of advanced transitional cell carcinoma of the uroepithelium. Cancer Chemother Pharmacol 11 Suppl:S1–S4, 1983.

14. Logothetis CJ, Samuels ML, Ogden S, et al: Cyclophosphamide, doxorubicin and cisplatin chemotherapy for patients with locally advanced urothelial tumors with or without nodal metastases. J Urol 134(3):460–464, 1985.

15. Harker WG, Meyers FJ, Freiha FS, et al: Cisplatin, methotrexate, and vinblastine (CMV): an effective chemotherapy regimen for metastatic transitional cell carcinoma of the urinary tract. A Northern California Oncology Group study. J Clin Oncol 3(11):1463–1470, 1985.

16. Sternberg CN, Yagoda A, Scher HI, et al: M-VAC update of methotrexate (MTX), vinblastine (VLB), Adriamycin (ADM), and cis-platinum (DDP) for urothelial tract cancer, meeting abstract. Proc Am Soc Clin Oncol 4:105, 1985.

17. Logothetis C, Samuels M, Ogden S, et al: Adjuvant chemotherapy for invasive bladder carcinoma: a preliminary report, meeting abstract. Proc Am Soc Clin Oncol 4:108, 1985.

Texas Medical Association 120th Annual Session May 13–17, 1987 Houston

Houston—A Great Place To Be In May '87

Youthful, luxurious and probably habit forming—Houston—site of the 120th Annual Session offers excitement, hospitality, charm. When Texas Medical Association and Auxiliary members convene May 13–17 they will enjoy the city's famous Southern hospitality, cosmopolitan sophistication and cultural evolution.

A supercity—vast, varied, vital—Houston awes the world with its boundless energy, vibrant commerce, and its emergence into unchartered fields such as space, science, oceanography, medical research.

Take time to view the cityscapes—natural and manmade; visit the sports arenas—Astrodome and Summit; shop the Olympian malls. Experience the culture and the arts. Enjoy fine dining with a pinnacle view or regional fare in a hide-away. Marvel at the renowned Texas Medical Center, one of the three major complexes in the nation. Consisting of 29 colleges, schools, institutes and hospitals, the Center attracts students, scientists, patients from around the world.

Convention Facilities—Beyond Your Expectations

The annual meeting will be held in downtown Houston. The area has much to offer. The architecture will stun you—exciting, bold, futuristic. The superstructures stand as proud symbols of progress which has catapulted the city into the nation's fourth largest city.

The giant imposing structures—actually cities within cities—provide efficiency, quality, beauty to resident and visitor. The Albert Thomas Convention and Exhibit Center, part of the Houston Civic Center and the focal point for all meetings and exhibits for the TMA Session, offers superb exhibit space and meeting accommodations. The surrounding hotels where members and guests will be housed are outstanding. The Hyatt Regency, a contemporary architectural wonder, features a 30-floor open atrium and park-like lobby. Doubletree Hotel, elegantly French, offers deluxe rooms and suites overlooking Sam Houston Park. The hotel is connected to the downtown tunnel system which leads to major businesses, shops and restaurants. Auxiliary headquarters, Four Seasons Hotel, is eloquently contemporary—rich woods, handwoven oriental tapestries. A relaxed and comfortable atmosphere. The Whitehall Hotel has elegant public rooms filled with fine antiques. Holiday Inn—Downtown Houston, one of the world's largest, is convenient to other hotels and the Convention Center.

Scientific Sessions, House of Delegates and Exhibits—Albert Thomas Convention and Exhibit Center

Business Sessions (Boards, Councils, Committees, Delegates' Housing)—Hyatt Regency Houston

Auxiliary Headquarters—Four Seasons Hotel

General Housing/Meetings—Doubletree Hotel at Allen Center

General Housing/Meetings—The Whitehall

General Housing—Holiday Inn Houston—Downtown

Features

Exhibits—Scientific, Technical

Section Programs—Some 500 scientific presentations in Allergy, Asthma, and Clinical Immunology—Colon and Rectal Surgery—Digestive Diseases—Diseases of the Chest—Endocrinology—Family Practice—Internal Medicine—Neurological Surgery—Neurology—Nuclear Medicine—Obstetrics and Gynecology—Occupational Medicine—Oncology—Ophthalmology—Otolaryngology—Pathology—Pediatrics—Physical Medicine and Rehabilitation—Plastic, Reconstructive, and Maxillofacial Surgery—Psychiatry—Public Health—Radiology—Surgery—Urology.

Specialty Society Programs—In addition to numerous topics of general interest, you will have an opportunity for an update on your own particular specialty.

Sunrise Sessions—Informal presentations by guest speakers on topics of interest to all specialists. Have coffee with one of the professors from 8:15 to 9:15 am on Thursday, Friday and Saturday and join the discussions.

Sports/Alumni Events—Golf and Tennis Tournaments; Fun Run; Alumni Parties; Class Reunions.

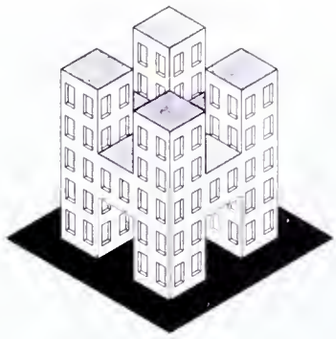
Auxiliary Program

The theme for the 1987 convention of the TMA Auxiliary will be "From This Moment On" in keeping with the progressive theme for the 1986–1987 year.

The convention will open with a gala champagne welcome reception honoring county presidents Wednesday, May 13. All business sessions will be held Thursday morning, May 14, including recognition of 1986–1987 award winners. The Thursday luncheon speaker will be Ninfa, Houston's highly successful entrepreneur and owner of the chain of Ninfa's Restaurants.

The 1987–1988 board will meet Friday, May 15, and the installation of officers will take place during the luncheon which will feature an outstanding speaker.

A wide array of special optional events has been planned for auxiliary members



during the 1987 conventian. Among them will be a tour of River Oaks hames, a financial planning seminar by Dean Kanaly, a demonstration af the Four Seasons' "light cuisine" by the hotel's chef and a series of "Dine-Around" dinners offered for Thursday evening.

Far additianal information, contact TMA Auxiliary, 1801 North Lamar Blvd., Austin 78701, 512/477-6704.

Registration

There is na registration fee far members of the Texas Medical Association, for speakers and exhibitars in the annual session program, and for nonmembers such as officially-invited guests of the Assaciation.

Registration fees are charged for some nanmember categaries, and these are mentianed in the nanmember categaries listed belaw:

Nonmember Registration Fees

a. Physicians	**$100**
b. Allied Health Disciplines—Nurses, Technicians, Medical Assistants	**$10**
c. In-Training—Interns, Residents, Fellows	**$10**
d. Students	**$10**
e. Praspective Exhibitors and Approved Visitors	**$50**
f. Spouses of Nanmember Physicians	**$10**

One Location for Registration for Session

(See hours indicated):

Albert Thomas Convention and Exhibit Center
East Hall, Smith Street Entrance

Wednesday, May 13, 9 am–5:30 pm
Thursday, May 14, 7 am–5:30 pm
Friday, May 15, 7 am–5:30 pm
Saturday, May 16, 7 am–3:30 pm

Yau may register in advance af the sessian by completing the Advance Registratian Farm printed here. Pick up badge and registration materials during abave haurs.

Guest Speakers

H. Whitney Boggs, Jr., MD
Shreveport, Lo
colon and rectal surgery

Robert Coles, MD
Cambridge, Mass
child psychiatry

John S. Collis, MD
Clevelond, Ohio
neurological surgery

Reginald R. Cooper, MD
Iowa City, Iowo
orthopaedic surgery

John J. Coury, Jr., MD
Port Huron, Mich
surgery;
President, Americon Medical Association

Dale Daniel, MD
San Diego, Calif
orthopaedic surgery

Scott F. Davies, MD
Minneapolis, Minn
internal medicine (pulmonory diseases)

Charles A. Fager, MD
Burlington, Mass
neurological surgery

David N. F. Fairbanks, MD
Washington, DC
otolaryngology

Robert G. Feldman, MD
Boston, Moss
neurology and pharmacology

Ian B. Fries, MD
Brick, NJ
orthopaedic surgery;
President, National Flying Physicians Association

Rudolph P. Galask, MD
Iowa City, Iowa
obstetrics and gynecology

M. Eric Gershwin, MD
Davis, Calif
rheumatology/allergy/immunology

Jerome C. Goldstein, MD
Washington, DC
otolaryngology

Stanley A. Herring, MD
Kirklond, Wash
physical medicine and rehabilitation

Joseph Jankovic, MD
Houston, Tex
neurology

Ralph E. Kauffman, MD
Detroit, Mich
pediatrics and pharmocology

David W. Kennedy, MD
Boltimore, Md
otolaryngology

Ira J. Kodner, MD
St. Louis, Mo
colon and rectal surgery

Steven M. Larson, MD
Bethesda, Md
nuclear medicine

Pia Mellody, RN
Wickenburg, Ariz
alcoholism ond chemical dependency counseling

Dean D. Metcalfe, MD
Bethesda, Md
allergy and immunology

Stephen H. Miller, MD
Portland, Ore
plastic and reconstructive surgery

Byron A. Myhre, MD, PhD
Torrance, Calif
pathology

Richard M. Narkewicz, MD
South Burlington, Vt
pediatrics

Harold S. Nelson, MD
Denver, Colo
ollergy ond immunology

Eric Pfeiffer, MD
Tompa, Fla
geriatric psychiotry

Peter Randall, MD
Philadelphia, Po
plastic surgery

Robert C. Reeder, MD
Memphis, Tenn
plastic and reconstructive surgery

Ensor Rodriguez-Lopez, MD, PhD
Los Angeles, Calif
occupotional medicine

J. James Rowsey, MD
Oklahoma City, Okla
ophthalmology

Julio V. Santiago, MD
St. Louis, Mo
pediatrics; endocrinology ond metobolism

Herbert H. Schaumburg, MD
Bronx, NY
neurology

Rhea Seddon, MD
Houston, Tex
astronoul, aerospoce medicine ond emergency medicine

Edward A. Sickles, MD
San Froncisco, Calif
radiology

J. Graham Smith, Jr., MD
Augusta, Ga
dermatology

Volker K. H. Sonntag, MD
Phoenix, Ariz
neurologicol surgery

Theodore H. Stanley, MD
Salt Lake City, Utoh
anesthesiology

Theodore I. Steinman, MD
Boston, Moss
nephrology

Lenore C. Terr, MD
San Francisco, Calif
psychiatry

David H. Thornberry
Austin, Tex
Member, State Board of Insurance

Henry J. L. Van Dyk, MD
New Orleons, La
ophthalmology and neurology

Joseph Westermeyer, MD, PhD
Minneapolis, Minn
psychiatry

he Four Freshmen—
'otal Entertainment

e fabulous Four Freshmen—singers, sicians, entertainers—will dazzle as Medical Association and Auxiliary mbers with their versatility Friday ening, May 15, during the 1987 An- al Session. Featured attraction for the sociation/Auxiliary party, America's mber One Vocal and Instrumental artet will give a stirring performance day in the beautiful Imperial Ball- om, Hyatt Regency Hotel. The Bo- gles Band, a popular Houston dance hestra, and Gary Bun Richardson, nedian, will provide a "don't miss" ening. The party begins at 8 pm and ver at 1 am. There will be light hors euvres and a cash bar for cocktails. y proceeds will be donated to the xiliary Student Loan Fund.

Bojangles Band Members

The "instrumental" quality which identifies the Freshmen Sound was brought to focus by their inventive concept of using their voices as musical instruments. Combined with their knowledge of harmony, the effect of a modern orchestral ensemble is created. Highly versatile, the Frosh trade around and play with professional skill seven instruments. Their albums, The Four Freshmen and Five Trombones, The Four Freshmen and Five Saxes, etc. are collector's items.

Fresh, different, appealing, the group is as popular in the 1980s as when they began singing as college freshmen in the 1950s and were "discovered" by Stan Kenton. "Day by Day," "Graduation Day," "How Can I Tell Her," and "It's a Blue World" will stir some good memories. Bob Flanigan, the leader and original member of the group, enthralls audiences with his outstanding trombone playing and wry humor. Saxophonist Audie Goodman sings second part and came to fame with the legendary Modernaires band. Mike Beisner sings third and plays a mean trumpet, while Rod Henley sings fourth vocal part and plays a variety of instruments including keyboards, trumpet and trombone.

Get a group together and plan a memorable evening with the Four Freshmen. The fun begins at 8 pm, Friday, May 15. Tickets are $25 per person and should be ordered in advance of the Session by completing the form here.

eneral Meeting
uncheon Speakers
xamine the Future

e President of the American Medical sociation, John J. Coury, Jr., MD, will plore "Challenges of American Medi- e" in his Friday, May 15, General eting Luncheon address in the Albert mas Convention Center. Dr. Coury, a neral and pediatric surgeon from Port ron, has spent his tenure as President iting with colleagues over the nation garding the future of medicine and the ividual physician. He has served in nerous capacities with American dical Association and Michigan State dical Society. He is currently Chair- n of the Council of the World Medical sociation.

Dr. Rheo Seddon

Physician-Astronaut, Rhea Seddon, MD, will share her experience in space and provide information on NASA's future activities Saturday, May 16, at the General Meeting Luncheon. Dr. Seddon made her first trip beyond earth's boundaries as Mission Specialist in April 1985. She was responsible for deployment of the Leasat Satellite, Remote Manipulator System operations and the American Flight Echocardiograph Experiment.

Dr. Seddon received her MD degree from the University of Tennessee College of Medicine in 1973. Between the period of her internship and residency, she served as an emergency room physician in Mississippi and Tennessee hospitals, and now serves in this capacity in the Houston area in her spare time. Dr. Seddon also has done research into the effects of radiation therapy on nutrition in cancer patients. Married to Astronaut Robert L. Gibson, they have a four-year-old son.

Both luncheons are scheduled in Room 201, Albert Thomas Convention Center, 12:15–2 pm. Purchase tickets ($20 per person) in advance by completing the form here.

1987 Annual Session Advance Registration Form (please print)

name

address

city state zip

specialty

Members, please check all applicable spaces below:

- ☐ Physician
- ☐ Intern/Resident/Fellow
- ☐ Medical Student
- ☐ TMA Officer
- ☐ TMA Trustee
- ☐ TMA Delegate
- ☐ TMA Alternate Delegate
- ☐ TMA Councilor
- ☐ TMA Vice Councilor
- ☐ TMA Council/Committee
- ☐ **AMA Member**
- ☐ AMA Delegate
- ☐ AMA Alternate Delegate
- ☐ CMS President
- ☐ 50 Year Club
- ☐ Hospital Medical Staff Section Representative
- ☐ TEXPAC
- ☐ TEXPAC 300 Club
- ☐ MSS Executive Council
- ☐ MSS Chapter Officer
- ☐ MSS Chairman
- ☐ RPS Chairman
- ☐ RPS Councilor
- ☐ RPS Executive Council
- ☐ Speaker
- ☐ Scientific Exhibitor
- ☐ **Satisfying state level meeting requirement**

Nonmember	Fee
☐ **Speakers, Exhibitors**	waived
☐ **TMA and County Medical Society Staff and Family**	waived
☐ **Physicians**	$100
☐ **Interns, Residents, Fellows**	$10
☐ **Medical Students**	$10
☐ **Allied Health Personnel**	$10
☐ **Prospective Exhibitors, Approved Visitors**	$50
Nonmember's Family	
☐ Family of Nonmembers	$10
☐ Children (21 and under)	waived

Please mail check and registration form to: Texas Medical Association Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Advance Ticket Reservation Form

name

address

city state zip

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Complete the advance ticket reservation order form, return it to TMA with your check. Pick up tickets at the registration area. Note ticket sales location and hours.

Number of Tickets	Function and Price Inclusive of tax and gratuity	Amount
_____	**The Four Freshmen** **BoJangles Band** **Comedian Gary Bun Richardson** Friday, May 15, 8 pm–1 am $25 per person	_____
_____	**General Meeting Luncheon** **John J. Coury, Jr., MD** Friday, May 15, 12:15–2 pm $20 per person	_____
_____	**General Meeting Luncheon** **Astronaut Rhea Seddon, MD** Saturday, May 16, 12:15–2 pm $20 per person	_____
	TOTAL	$_____

Advance registration forms and ticket money must be received by **April 7. No refunds after April 29.**

Please complete and return before April 7 to: Texas Medical Association, Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Final Program Order Form

The Program and Abstracts of the 120th Texas Medical Association Annual Session will be available in early April. If you wish to order your copy in advance, please return this form with a check for $5.00 to Texas Medical Association, Business Office, 1801 North Lamar Blvd., Austin, Texas 78701.

Please send a copy of the Program and Abstracts for the 120th Annual Session to:

name

address

city state zip

My check for $5.00 is enclosed.

ake Your servations Now

equests will be processed first-ome, first-served by the Housing Bu-eau, Greater Houston Convention & isitors Council through its comput-rized system.

omplete ***in full*** the ***Official Housing equest Form*** and return it imme-iately to:

exas Medical Association Housing ureau
300 Main
louston, Texas 77002-9396

o not send housing form to Texas ledical Association. This will only elay your request.

nly reservations received on the ***fficial Housing Request Form*** will e accepted. Hotels will not accept eservations directly, and telephone equests cannot be accepted.

ist ***three*** hotels in order of reference.

eadline for reservations is April 29.

firmations

oom confirmation will be sent to you ***irectly*** from the hotel within three eeks of receipt of your request by e Housing Bureau. Please check it arefully to be sure all information is orrect.

m Deposits

o not send any room deposit with lousing Form. Should a deposit be equired, the hotel will request it.

eservations will be held until 6 pm f the arrival date unless a later ar-ival time is indicated. If a deposit is equired to hold your room past pm, you will be notified at the time f confirmation by hotel. The deposit hould be mailed directly to the hotel.

nges and Cancellations

ny changes in room reservations, rrival or departure dates should be ent in writing directly to the hotel.

ll cancellations should be sent to e Housing Bureau immediately so at others can be accommodated. our notice of cancellation must be eceived within 48 hours of your cheduled arrival or your deposit annot be refunded. ***DON'T BE A NO SHOW!***

ttle Service

huttle service will be provided be-ween hotels and Convention Center.

Participating hotels and codes:

Deadlines for Reservations—April 29

1. **Four Seasons Hotel* (FSDT)**
   1300 Lamar Street
   (Auxiliary Headquarters; General Housing)

   Singles $75
   Doubles $85

2. **Holiday Inn Houston—Downtown (HID)**
   801 Calhoun Street
   (General Housing)

   Singles/Doubles $58

3. **Doubletree Hotel* (DBH)**
   at Allen Center
   400 Dallas Street
   (Housing for Program Participants)

   Singles/Doubles $75

4. **Hyatt Regency Houston* (HR)**
   1200 Louisiana Street
   (Delegates' Housing; Board, Council, Committee Meetings)

   Singles $83
   Doubles $85

5. **The Whitehall (WHIT)**
   1700 Smith Street
   (General Housing)

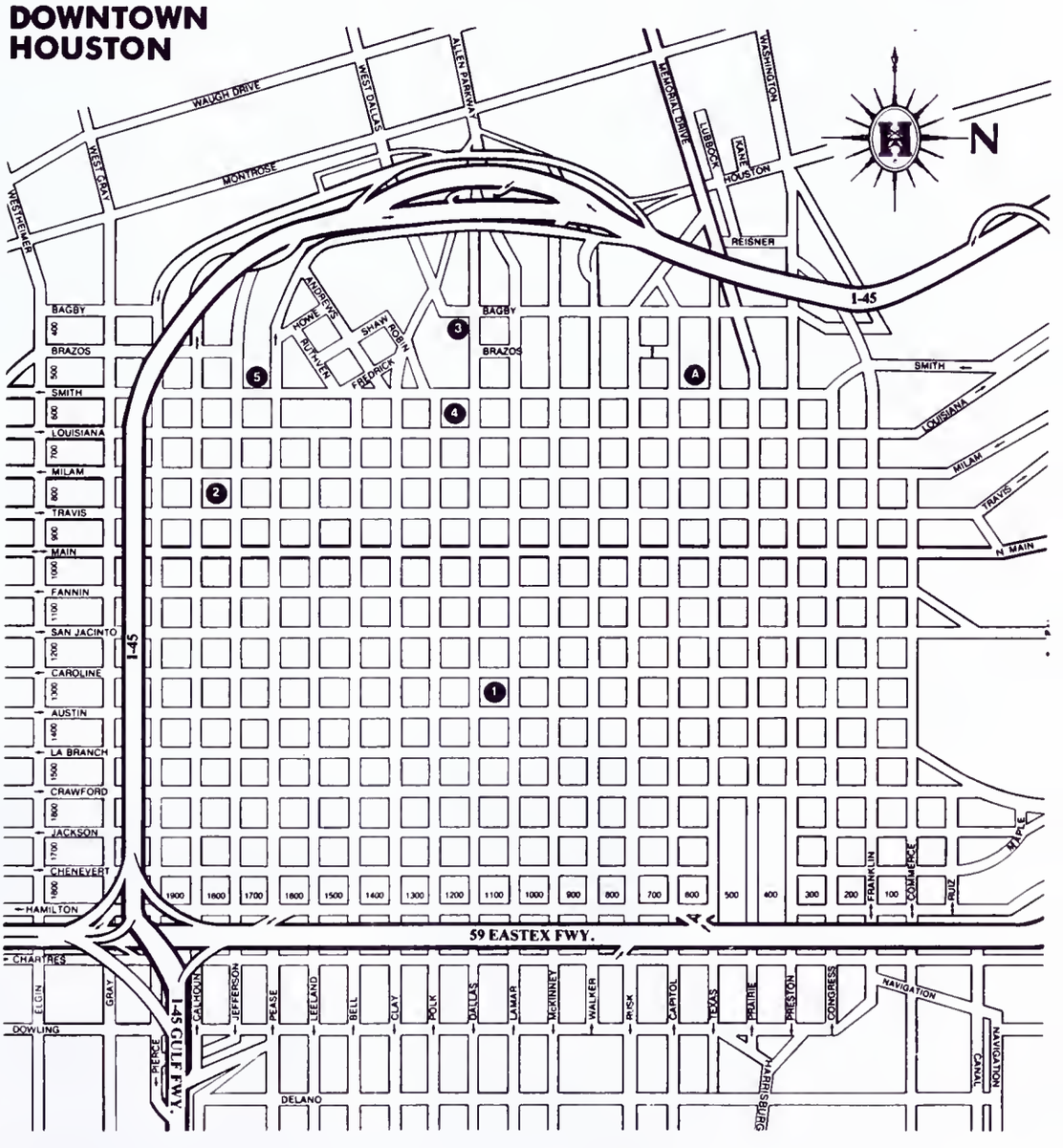
   Singles/Doubles $65

A **Albert Thomas Convention and Exhibit Center**
   612 Smith Street
   (Scientific Sessions, House of Delegates Meetings, Exhibits)

The above room rates do not include 11% occupancy tax and daily parking fees.

*Headquarters Hotels

DOWNTOWN HOUSTON



FOR HOUSING BUREAU USE ONLY

Texas Medical Association
120th Annual Session
May 13–17, 1987
Houston

MAIL TO:

TEXAS MEDICAL ASSN.
HOUSING BUREAU
3300 MAIN
HOUSTON, TX 77002-9396

OFFICIAL HOUSING REQUEST FORM

• PLEASE READ CAREFULLY •

_ PLEASE **PRINT** OR **TYPE** ALL ITEMS TO ASSURE ACCURACY.
_ COMPLETE EACH PART BELOW IN DETAIL FOR CORRECT AND RAPID COMPUTER PROCESSING.
_ SHOULD MORE THAN **TWO (2)** ROOMS BE NEEDED, FORM MAY BE DUPLICATED, OR SUPPLEMENTAL ROOM LIST **MUST** BE ATTACHED USING SAME FORMAT AS IN PART III.
_ **ALL** CONFIRMATIONS WILL BE SENT TO INDIVIDUAL INDICATED IN PART I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

NAME OF PERSON REQUESTING ROOMS

(FIRST NAME) (LAST)

(NAME OF CLINIC, GROUP, OR COMPANY)

(STREET ADDRESS OR P.O. BOX NUMBER)

(CITY) (STATE) (ZIP)

(COUNTRY) (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: Select **THREE** Hotel/Motels of your choice. No request will be processed without **THREE** choices.

FIRST CHOICE (HOTEL CODE) SECOND CHOICE (HOTEL CODE) THIRD CHOICE (HOTEL CODE)

PART III

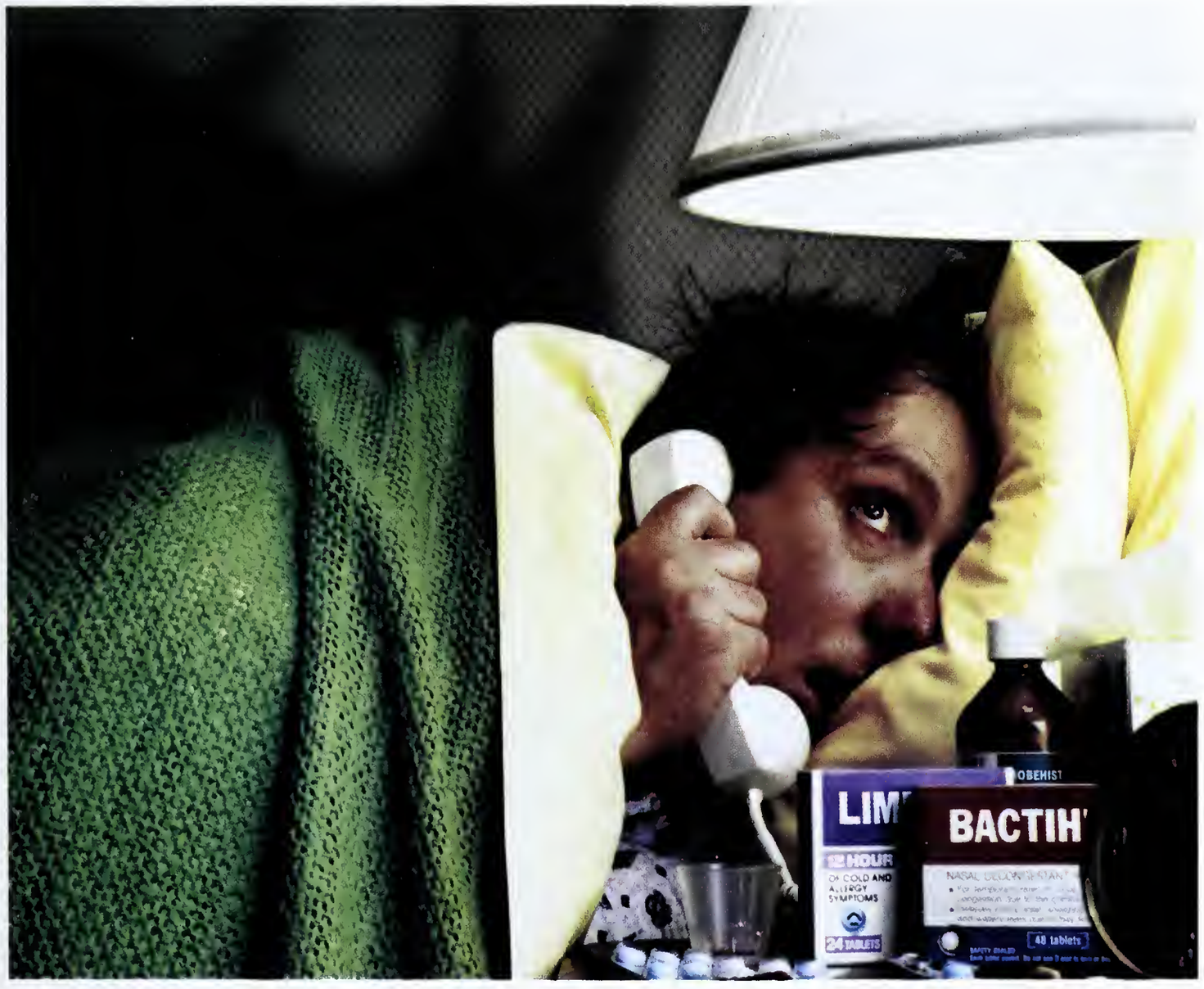
INSTRUCTIONS:
1. **PRINT** OR **TYPE** NAMES OF **ALL** PERSONS OCCUPYING EACH ROOM.
2. SELECT TYPE ROOM DESIRED WITH ARRIVAL AND DEPARTURE DATES.
3. SUPPLEMENTAL LIST FOR ADDITIONAL ROOM **MUST** USE SAME FORMAT.
4. PRINT OR TYPE LAST NAME FIRST.

	OCCUPANTS NAME/S (PRINT LAST NAME FIRST)	P + 1—Parlor & one bedroom	P + 2—Parlor & two bedrooms
ROOM NO. 1	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.
ROOM NO. 2	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.

FOR USE OF ASSN. ONLY

NOTE: PLEASE RECHECK ALL ITEMS FOR CORRECT INFORMATION

Oddly enough, "wild rhinos" talk to you only after they've dried up



...from too many days on drying antihistamines.

Back when all he had was a simple, runny rhinovirus, antihistamines made him feel more civilized. But now that sinusitis and bronchitis have set in, that continual barrage of self-medication with drying antihistamines has turned him into a "wild rhino."

Now his sinuses throb. His chest aches. And no matter how much he coughs and blows, those sluggish secretions don't budge.

"Wild rhinos" need more than a lesson in self-medication. They need your prescription for ENTEX® LA. ENTEX LA opens swollen sinus passages so he can breathe easier. Then it thins slow-moving respiratory secretions so coughing becomes less painful—more productive.

What's more, ENTEX LA doesn't contain anything to sedate him. Because a "wild rhino" is a lot easier to tame when his head is clear.

ANTIHISTAMINE-FREE

Entex® LA

PHENYLPROPANOLAMINE HCl	.75 mg
GUAIFENESIN	400 mg

IN A SPECIAL BASE TO PROVIDE A PROLONGED THERAPEUTIC EFFECT.

Rx ONLY

Just decongestion and drainage... without antihistamine drying and drowsiness.

© 1986 NEPI

Please see next page for brief summary of prescribing information.

ANTIHISTAMINE-FREE

Entex® LA

PHENYLPROPANOLAMINE HCl 75 mg
GUAIFENESIN 400 mg

IN A SPECIAL BASE TO PROVIDE A PROLONGED THERAPEUTIC EFFECT

Before prescribing or administering, see package circular for full product information. The following is a brief summary.

INDICATIONS AND USAGE: Entex LA is indicated for the symptomatic relief of sinusitis, bronchitis, pharyngitis, and coryza when these conditions are associated with nasal congestion and viscous mucus in the lower respiratory tract.

CONTRAINDICATIONS: Entex LA is contraindicated in individuals with known hypersensitivity to sympathomimetics, severe hypertension, or in patients receiving monoamine oxidase inhibitors.

WARNINGS: Sympathomimetic amines should be used with caution in patients with hypertension, diabetes mellitus, heart disease, peripheral vascular disease, increased intraocular pressure, hyperthyroidism, or prostatic hypertrophy.

PRECAUTIONS: Information for Patients: Do no crush or chew Entex LA tablets prior to swallowing.

Drug Interactions: Entex LA should not be used in patients taking monoamine oxidase inhibitors or other sympathomimetics.

Drug/Laboratory Test Interactions: Guaifenesin has been reported to interfere with clinical laboratory determinations of urinary 5-hydroxyindoleacetic acid (5-HIAA) and urinary vanilmandelic acid (VMA).

Pregnancy: Pregnancy Category C. Animal reproduction studies have not been conducted with Entex LA. It is also not known whether Entex LA can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Entex LA should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether the drugs in Entex LA are excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants, a decision should be made whether to discontinue nursing or to discontinue the product, taking into account the importance of the drug to the mother.

Pediatric Use: Safety and effectiveness of Entex LA tablets in children below the age of 6 have not been established.

ADVERSE REACTIONS: Possible adverse reactions include nervousness, insomnia, restlessness, headache, nausea, or gastric irritation. These reactions seldom, if ever, require discontinuation of therapy. Urinary retention may occur in patients with prostatic hypertrophy.

OVERDOSAGE: The treatment of overdosage should provide symptomatic and supportive care. If the amount ingested is considered dangerous or excessive, induce vomiting with ipecac syrup unless the patient is convulsing, comatose, or has lost the gag reflex, in which case perform gastric lavage using a large-bore tube. If indicated, follow with activated charcoal and a saline cathartic. Since the effects of Entex LA may last up to 12 hours, treatment should be continued for at least that length of time.

NDC 0149-0436-01 Bottle of 100

CAUTION: Federal law prohibits dispensing without prescription.

ENX LATB-BS7

REVISED JULY 1985

Norwich Eaton
Norwich Eaton Pharmaceuticals, Inc.
Norwich, New York 13815-0231
A Procter & Gamble Company

Tell Your Patients About

The Medical Liability Crisis

Many of your patients are reading and hearing daily about the professional liability insurance crisis. This new brochure can help you tell your patients the medical side of the story. It describes the impact the crisis is having on health care costs and on access to health care and the courts, and offers suggestions for easing the crisis.

The brochure was prepared by TMA to be used in waiting rooms. It is free to TMA members. Please order in increments of 50.

Please send me _____ copies of the brochure, **"The Medical Liability Crisis: The Cure Is In Working Together."**

__ I am interested in speaking to nonmedical audiences about the medical liability crisis and tort reform. Please send me a copy of the speech, "A Liability . . . For Everyone."

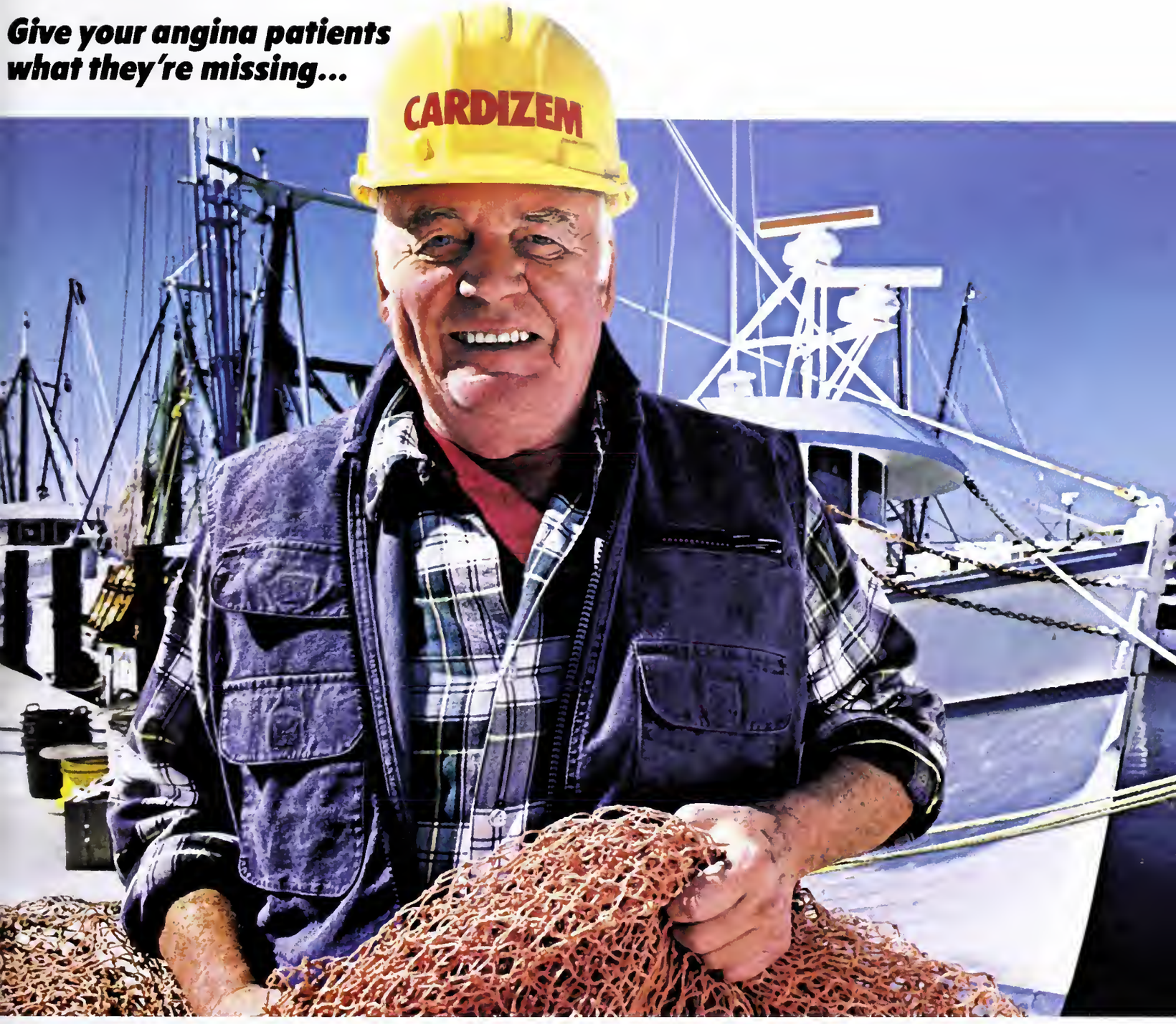
Name

Address

City State Zip

Texas Medical Association
Communication Department
1801 North Lamar Blvd.
Austin, Texas 78701
(512) 477-6704

Give your angina patients what they're missing...



CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3*]***
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardioc Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 7/86

See complete Professional Use Information before prescribing.

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers. Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983, 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers. Actions on the heart and uses in ischemic heart disease. Consultant 1984,24(Dec):150-159.* ***3.*** *Johnston DL, Lesaway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris. A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985,55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease. A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

Another patient benefit product from
PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0246M6

ZOVIRAX®
(acyclovir)
CAPSULES

Prevent genital herpes recurrences month after month with daily therapy.

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

Please see last page of this advertisement for brief summary of prescribing information.

ZOVIRAX® (acyclovir) CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page.

Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73/m^2.

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200"- Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Wellcome | Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Copr © 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Premenstrual syndrome: a time for introspection. Robert L. Reid, MD. The C.V. Mosby Company, *American Journal of Obstetrics and Gynecology,* vol 155, no 5, November 1986, pp 921–926.

Premenstrual syndrome has emerged as an important reproductive health care issue amid heated debate about whether such a condition, in fact, exists. Polarization of opinion on this issue has been the result of imprecision in the definition of premenstrual syndrome, leading to inappropriate generalization of the disruptive physical, emotional, or behavioral changes of premenstrual syndrome to the entire female population. A shortage of reliable scientific information on premenstrual syndrome has led to inconsistent, and often ineffective, medical intervention by a sometimes skeptical medical profession. Examination of individual biases and the external factors that have influenced our thinking on this issue may allow us to more clearly define our role as a specialty in the ongoing investigations and management of menstrual cycle-related illnesses.

Immunosuppression in viral infections. Barry T. Rouse and David W. Horohov. Copyright 1986 The University of Chicago Press, *Reviews of Infectious Diseases,* vol 8, no 6, November-December 1986, pp 850–873.

Viruses may cause immunosuppression by a variety of mechanisms. This review delineates four categories. First, immunosuppression can result from the direct effects of viral replication on lymphocyte functions. Either all classes of lymphocytes can be affected, as occurs in measles, or the effect can be restricted to a cell subtype, as is the case with human T cell-lymphotropic virus type III. Second, the activity of soluble factors of viral or host origin released from infected cells can affect immunosuppression. A third mechanism results from viral infection of macrophages and affects the function of these cells in natural and acquired immunity. Finally, immunosuppression may result from viral triggering of an imbalance in immune regulation, which culminates in the overactivity of suppressor cells. A detailed knowledge of the mechanisms by which viruses are involved in immunosuppression may help in the design of strategies to reverse the effect.

***Haemophilus influenzae* b polysaccharide vaccine.** Stephen L. Cochi, MD; David W. Fleming, MD; Harry F. Hull, MD, et al. American Medical Association, *American Journal of Disease of Children,* vol 140, December 1986, pp 1226–1230.

The introduction of *Haemophilus influenzae* type b (Hib) polysaccharide vaccine in 1985 provided an opportunity to study the extent to which physicians have adopted the use of the new vaccine in their routine practice behavior, the factors that predict Hib vaccine use by physicians, and how physicians have chosen to deal with differing recommendations for its administration. The authors surveyed all physicians providing primary care to children in New Mexico six to eight months after vaccine licensure to assess their knowledge of existing recommendations and their current behavior regarding use of the Hib vaccine. Of the 369 primary care physicians who responded, 100% of pediatricians, 98% of family practitioners, and 91% of general practitioners were aware that a vaccine against invasive Hib disease had been licensed. Sixty-three percent of physicians were currently using the vaccine. Vaccine usage varied significantly by specialty, with 86% of pediatricians reporting use compared with 61% of family practitioners and 31% of general practitioners. Physicians were significantly more likely to use Hib vaccine if they were young and if they worked in the private sector rather than the public sector. The three sets of recommendations for Hib vaccine use had been widely read; 85% of respondents had read at least one set. Practitioners confronted with differing recommendations had elected to give the vaccine permissively within existing guidelines. Our findings suggest that practitioners have adapted quickly to the introduction of Hib vaccine, but the public sector remains an obstacle to full implementation of this prevention strategy.

Neuropeptides and neurological disease. M. Flint Beal, MD, and Joesph B. Martin, MD, PhD. Little, Brown and Company, *Annals of Neurology,* vol 20, 1986, pp 547–565.

Neuropeptides are widely distributed in the central nervous system, where they serve as neuroregulators. Recent interest has focused on their role in degenerative neurological diseases. The authors describe the normal anatomy of neuropeptides in both the cerebral cortex and basal ganglia as a framework for interpreting neuropeptide alterations in Alzheimer's disease (AD), Huntington's disease, and Parkinson's disease. Concentrations of cortical somatostatin are reduced in AD and in dementia associated with Parkinson's disease. Concentrations of neuropeptide Y and corticotropin-releasing factor are also reduced in AD cerebral cortex. The reduced cortical concentrations of somatostatin and neuropeptide Y in AD cerebral cortex may reflect a loss of neurons or terminals in which these two peptides are co-localized. In Huntington's disease, basal ganglia neurons in which somatostatin and neuropeptide Y are co-localized are selectively preserved. Cerebrospinal fluid concentrations of neuropeptides in AD reflect alterations in cortical concentrations. Improved understanding of neuropeptides in degenerative neurological illnesses will help define which neuronal populations are specifically vulnerable to the pathological processes, and this could lead to improved therapy.

1987 Calendar Of Workshops
Sponsored By The Texas Medical Association

For your information: This is your calendar of workshops and seminars sponsored by the Texas Medical Association during 1987.

Keep this in a convenient place for easy reference. Tack it to your bulletin board! Please feel free to contact us when you have questions: **TMA Practice Management Workshops, 1801 North Lamar Blvd., Austin, Texas 78701, 512/477-6704, ext. 262.**

All workshop registration information will be mailed approximately six weeks prior to the scheduled time for each series.

How to Get Started in Medical Practice is a two-day series for physicians who plan to go solo, join a partnership or group practice, or need direction on which way to go. Concepts presented in this workshop will help avoid many medical practice management problems. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. No registration fee for senior residents currently enrolled in a recognized Texas residency program. Registration fee for others: TMA member, $115; non-member, $140.

Insurance Claims Preparation, Coding and Documentation is a half-day workshop that focuses on the "how-to's" of insurance claims preparation and coding with special emphasis on medical, surgical, and diagnostic coding. Workshop material includes sample claim forms and actual case histories from which to learn. Faculty: Harold Whittington & Associates, Dallas. Registration fee: TMA member, $75; non-member, $100.

How to Improve Your Third-Party Reimbursement is a half-day workshop presented in conjunction with the coding series described above. The series is designed to help physicians and their office staffs gain a better understanding of the Medicare/Medicaid reimbursement system and how to obtain appropriate third-party reimbursement. Faculty: Harold Whittington & Associates, Dallas. Registration fee: TMA member, $75; non-member, $100.

Medical Office Management Institute (MOMI) is a week-long series of in-depth programs specifically designed for medical office managers, supervisors and office staff. The one-day workshops include **Computers in Medical Practice, Patient Flow Management, Personnel Management, Personnel Problem Solving** and **Financial Management.** Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Registration fee: TMA member, $120 for each one-day workshop; $525 for all five workshops. Non-member, $155 for each one-day workshop; $700 for all five workshops.

Practice Management Series includes two half-day workshops designed for the physician who has been in practice a few years and for the entire office staff. The workshops include **Better Collections, Billing and Insurance Methods,** and **Reception and Patient Flow Techniques.** Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Registration fee for each half-day workshop: TMA member, $75; non-member, $100.

The following county medical societies are participating as co-sponsors in the 1987 TMA practice management workshops and seminars:

Bexar County Medical Center
El Paso County Medical Society
Potter-Randall County Medical Society
Tarrant County Medical Society
Taylor-Jones-Haskell County Medical Society
Travis County Medical Society

Marketing Techniques for a Successful Practice is a one-day workshop that addresses the marketing needs in today's medical practice environment. Tested ideas, from years of consulting and research with the widest variety of physicians, are presented. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Registration fee: TMA member, $155; non-member, $175.

How to Run a More Profitable Practice is currently being developed for presentation in the fall of 1987. The one-day workshop will address maximizing revenues, controlling overhead costs, and "putting it together" to run a more efficient and more profitable practice. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Watch for a special brochure announcing this workshop series to be mailed in late summer of 1987.

Personal Income and Estate Tax Planning is a two-day seminar for physicians and spouses to help them understand the fundamentals of tax planning and why prudent planning and management are so important. Faculty: Robert Jorrie, Jorrie, Archer, and Standley, Inc., San Antonio. Registration fee: TMA member, $220; non-member, $270. (There is no additional cost for spouse if physician attends.)

Increasing Your Net Worth Through Financial, Pension, and Investment Planning is a one-day seminar designed to acquaint physicians with techniques available under current law to establish the most effective business structure for their medical practice in order to minimize federal income tax liability, increase net worth, and create additional funds for practice development and growth. Faculty: Glazer, Suellentrop, and Associates, Inc., Dallas. Registration fee: TMA member, $170; non-member, $210. (There is no additional cost for spouse if physician attends.)

Gearing Up for Retirement is a one and one-half day seminar designed to assist physicians and their spouses in planning for a successful retirement. Seminar topics include closing a medical practice, legal and tax considerations, and maximizing retirement income. Registration fee: TMA member, $210; non-member, $250. (There is no additional cost for spouse if physician attends.)

Other Workshops and Seminars may be developed and offered by TMA during 1987. Each workshop and seminar series will be preceded by a special brochure announcing the program and schedule of offerings.

1987 Workshop Schedule By Series

Workshop Series	Date	City
How to Get Started in Medical Practice (Conomikes Associates, Inc.)	Fall 1987— dates to be announced	Amarillo Dallas El Paso Fort Worth Galveston Houston Lubbock San Antonio Temple
Insurance Claims Preparation, Coding and Documentation (Morning) Harold Whittington & Associates) **How to Improve Your Third-Party Reimbursement** (Afternoon) (Harold Whittington & Associates)	February 24 Feburary 25 February 27 March 10 March 11 March 13 March 24 March 25 April 1 April 7 April 8 April 10 September 16 September 18 September 29 September 30 October 2 October 13 October 14 October 16	San Antonio Corpus Christi Harlingen Amarillo Dallas Wichita Falls Beaumont Houston Tyler Austin Fort Worth Abilene San Antonio El Paso Lubbock Midland Dallas Waco Fort Worth Houston
Medical Office Management Institute (MOMI) (Conomikes Associates, Inc.	August 3–7 August 24–28	San Antonio Dallas
Practice Management Series (Conomikes Associates, Inc.)	June 2 June 3 June 4 June 23 June 24 June 25	Dallas Austin Houston San Antonio Galveston Fort Worth
Marketing Techniques for a Successful Practice (Conomikes Associates, Inc.)	January 20 January 21 January 22 February 17 February 18 February 19	Fort Worth San Antonio Houston Austin Lubbock Dallas
How to Run a More Profitable Practice (Conomikes Associates, Inc.)	October 6 October 7 October 8 November 4 November 5	Houston San Antonio Austin Amarillo Dallas
Personal Income and Estate Tax Planning (Robert Jorrie)	March 21–22 November 7–8	San Antonio Dallas
Increasing Your Net Worth (Glazer, Suellentrop, and Associates)	January 17 February 21 September 12 October 10	Houston Dallas San Antonio Austin
Gearing Up for Retirement	April 3–5 October 23–25	San Antonio Houston

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Please indicate six key words for indexing.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within four months of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Medical professional liability in Texas—a primer

Texas courts today often must adjudicate claims based on space-age medical technology and procedures unknown even a few years ago. However, basic questions concerning a physician's skill and care in dealing with birth, disability, disease, and death remain and recur. Statutes and decisions in prior cases determine the rights of plaintiffs and defendants in these cases. This article describes the elements a plaintiff must plead and prove in order to recover damages from a physician in a medical professional liability lawsuit.

Early theories of recovery

Texas jurisprudence contained relatively few medical professional liability cases until well into this century. Some of those early cases were based upon theories of recovery such as battery and breach of contract. In general, battery is the use of unlawful violence upon another person with intent to injure him (1). However, since most physicians' acts lack the elements of violence and intent to injure, such cases are classified as "technical" battery (2). In *Moss v Rishworth*, a child died after the physician performed a nonemergency tonsillectomy without the parents' consent (3). The court in Moss agreed that the defendant physician had committed a technical assault and battery.

Physicians also may be held liable for providing treatment more extensive than that authorized by the patient (2, p 14), for performing a procedure different from that agreed to, or for performing surgery on a different part of the body (4). Physicians also have a duty to provide patients with information on risks and hazards associated with proposed procedures (5). Prior to Aug 29, 1977, the effective date of the Medical Liability and Insurance Improvement Act, patients could characterize a physician's failure to provide adequate information to support an informed consent as an unconsented touching—a battery. However, all such allegations of a lack of informed consent now must be tried under a theory of negligence rather than battery (6).

Under common law principles, ie, rules derived from judicial decisions and based upon the ancient and unwritten law of England, the physician was held to be engaged in a "public," or "common," calling akin to that of an innkeeper or a common carrier (7). The patient could allege a lack of skill by the physician in performance of his public calling, and that breach of duty sometimes was characterized as a breach of contract. In Texas, recovery under a "contract to cure" theory requires that a patient prove that the physician expressly promised or warranted a particular result, that the physician failed to comply, and that the patient suffered injury as a result (2, p 24). As of Aug 29, 1977, the physician must have signed a written warranty statement to incur liability (8).

Medical professional liability suits based on contract law principles do not require expert testimony on behalf of the plaintiff because juries are considered capable of determining whether the physician made a specific warranty and whether the promise was breached. The physician may not defend the suit by proving that he used due care in his treatment because proof of negligence is itself irrelevant (2, p 24). However, the main problem plaintiffs face in contract actions is differentiating warranties of cure from "therapeutic reassurances" or "expressions of opinion, hope, or predictions" (2, p 25). Medical professional liability actions based on breach of contract are less common today because physicians seldom execute written warranties of results.

Negligence

The first reported medical professional liability case in Texas was heard on appeal by the Supreme Court in 1858 (9). Dr William J. Gautier sued William J. Graham for $187.57, the alleged value of his professional services provided to ten slaves belonging to Graham. The slaves suffered from typhoid, measles, exposure, and a lack of proper nursing care. All ten died while under Dr Gautier's care, and Graham refused to pay his bill. Graham answered Gautier's suit with a counterclaim for $10,700, the value of his property lost because of the doctor's allegedly unskillful and negligent treatment. The Supreme Court reversed the trial court's verdict for Dr Gautier and remanded the case for further proceedings, stating

> . . . a medical practitioner never insures the results, but simply engages that he possesses a reasonable degree of skill, such as is ordinarily possessed by a profession generally, and to exercise that skill with reasonable care and diligence; and, again, to exercise his best judgment, but is not responsible for a mistake of judgment. That is, after he has, with reasonable care and diligence, exercised ordinary skill, he is not responsible for a mistake of judgment, or for the result if he should happen to be mistaken. Such are the rules applicable to the ordinary, implied undertaking of a physician (9, p 120).

Thus, for almost 130 years Texas courts have decided cases involving allegations that physicians failed to exercise due skill and care in treating patients. Today most medical professional liability suits are based upon one or more theories of negligence. In Texas, negligence is a mixed question of law and fact. Juries must decide whether the defendant physician's conduct comports with what a reasonable and prudent physician would have done under the same or similar circumstances (10). More precisely, Texas law requires that the plaintiff plead and prove by a preponderance of the evidence four essential elements in any suit based upon a theory of negligence. First, the plaintiff must establish a legally-cognizable duty requiring the defendant to conform to a standard of conduct for the protection of others against an unreasonable risk. Second, the plaintiff must show that the defendant failed to conform to the required standard. Third, the plaintiff must prove a resulting actual injury. Fourth, the plaintiff must establish a reasonably close causal connection between the defendant's conduct and the injury (11).

Duty

A physician's duty of care arises from the existence of the physician-patient relationship. In Texas that duty is "contractual and wholly voluntary, created by agreement, express or implied" (12). A physician is not liable for even an arbitrary refusal to respond to a patient's urgent request for assistance if no physician-patient relationship exists at that time (12). Consent to treatment may be implied if the patient is unconscious or otherwise unable to consent, and an immediate operation is necessary to preserve life or health (13). Additionally, the consent the patient gives to a surgeon who is to perform an operation implies consent to secure such assistance by other physicians as the attending physician may require. Once the consulting or assisting physicians are retained on behalf of the patient, the physician-patient relation has been established (14).

Standard of care

Texas courts require that a physician exercise that degree of learning and skill ordinarily possessed by other physicians in the defendant physician's locality, or by the average physician in the same or similar circumstances (15). A general practitioner must seek consultation or refer the patient to a specialist if he or she knows or should know that in the exercise of reasonable care such consultation or referral is indicated (16). On the other hand, a specialist's conduct will be evaluated against the degree of skill that a specialist of ordinary prudence and skill would display in the same or a similar community and in the same or similar circumstances (17).

A physician also must apply his or her skill in a particular situation with reasonable care and diligence; ie, "all the care the patient needs, for as long as the patient needs it" (2, p 54). The physician must exercise his or her best judgment, but will not be liable for *non-negligent* mistakes in judgment that produce an unfavorable result (16). Additionally, a physician may not rely solely on allegations that he or she adhered to the "customary" or "accepted" practice. The Texas Supreme Court has held that compliance with custom is not conclusive proof of what a reasonable and prudent physician would have done in the same or similar circumstances. Otherwise, a poll of the profession would set the standard (18).

Two other evidentiary rules impact the plaintiff's ability to establish the standard by which a physician's conduct will be judged. While these rules—the "same school of practice" rule and the "locality" rule—had a greater exclusionary impact on testimony in professional liability suits earlier in this century, courts continue to recognize them. In general, a practitioner of one school of medicine is not competent to testify as an expert in a suit against a practitioner of another school of medicine (19). "Schools of medicine" mentioned most often in the cases were allopathic, osteopathic, homeopathic, eclectic, chiropractic, and Christian Science (2, p. 64). However, Texas courts now admit testimony from practitioners of "other schools" if they have knowledge of practices that are commonly and equally recognized in all fields and which are usually and customarily done by practitioners under circumstances similar to those at issue (20).

The "locality" rule also is much less likely today to cause the exclusion of testimony by an expert witness. Originally, the courts recognized that physicians practicing in small communities should not be held to the same standard of care in treatment and diagnosis as urban physicians who had access to better facilities (21). Today, Texas law allows testimony from urban experts in cases involving rural physicians. Because there are certain minimum safe and acceptable procedures that do not vary from place to place, experts from any locality who are familiar with them may qualify as expert witnesses. Administration of this community standard is within a trial court's discretion (22). The "locality" rule has been eroded piecemeal because of the wider availability of information among physicians and the increased availability of better facilities. It is unlikely today that substandard practice in a particular locality could be insulated by locality restrictions (2, p 75).

In summary, in a medical professional liability case, the plaintiff must establish the standard by which the defendant's conduct will be judged by expert testimony because laypersons are presumed to be unable to understand the complexities of medical issues without assistance (23). However, all the rules affecting the admissability of evidence relate to a single basic inquiry. What would the reasonable, prudent physician do in the same or similar circumstances?

Proximate cause

Once the plaintiff has established the standard of care, and subsequently that the defendant's conduct breached the standard, the plaintiff then must prove that the defendant's act or omission was the proximate cause of the injury. Proximate cause means ". . . that cause which, in a natural and continuous sequence, produces an event, and without which cause such event would not have occurred; and in order to be a proximate cause, the act or omission complained of must be such that a (physician . . .) exercising ordinary care would have foreseen that the event, or some similar event, might reasonably result therefrom. There may be more than one proximate cause of an event" (24).

The plaintiff in a medical professional liability lawsuit must establish causation (25), and it must be proved, not merely presumed (26). Although in some instances the experience of a layperson may be sufficient to establish proximate cause, in general, medical expert testimony is required (27). The expert testimony may establish basic principles from which the jury legitimately may infer causation (28), or the plaintiff may introduce direct evidence on the subject of causation. The plaintiff is not required to establish causation with medical certainty (16, p 679), or in terms of "reasonable medical probability." The determination of whether the expert has expressed an opinion in terms of sufficient probability must be made from the substance of the testimony rather than by the use of any particular word or phrase (2, p 281). In many cases, evidence will suggest several possible causes of the plaintiff's injury, all of which may not be attributable to negligence. If all the possible causes do not involve negligence, expert testimony on proximate cause is necessary (2, p 285).

Damages

A plaintiff is entitled to recover a sum that will, as a present cash payment, reasonably and fairly compensate him for such

items of loss as the evidence may disclose (29). In recent years, courts have expanded the categories of loss for which plaintiffs may recover. In an action based on the Texas wrongful death statute (30), or the Texas survival action statute (31), a plaintiff now may seek different damages depending upon his or her relationship to the deceased. A surviving spouse may seek damages for loss of consortium; loss of maintenance, support, counsel, and contributions; loss of companionship and society; past, present, and future mental suffering; and loss of household services (2, pp 453–454).

The child of a deceased parent now may seek damages that include loss of maintenance and support, counsel, and contribution; loss of companionship and society; and past, present, and future mental suffering (2, p 454).

Parents of a deceased child now may seek damages for the reasonable cash value of probable future contributions; the reasonable cash value of services; loss of companionship and society; and past, present, and future mental suffering (2, p 454).

As a representative of a decedent's estate, a plaintiff may recover compensation for conscious physical pain and mental anguish suffered prior to death as a result of defendant's negligence; and funeral and medical expenses (2, pp 454–455).

Among the variety of damages potentially available in a personal injury action are lost earnings and lost earning capacity; past, present, and future physical pain; past, present, and future mental anguish; and past, present, and future medical expenses (2, p 455). If gross negligence or fraud is proven, a plaintiff may recover punitive or exemplary damages (18, p. 166), but the award must not be excessive (32). A plaintiff also may recover exemplary damages from the estate of a deceased defendant (33).

Conclusion

The rules Texas courts use to decide medical professional liability lawsuits are derived for the most part from the common law. That is, past judicial decisions involving the duty of defendants, rules of evidence, or recognition of the right to recover in particular situations constitute precedent. Lower courts are bound to follow these precedents in subsequent cases until the Texas Supreme Court or the legislature decides that justice, public policy, and/or changing societal needs require a different result. Recently, the Texas Supreme Court has been responding to its perception of "changing societal needs" by setting aside precedent and recognizing new theories of liability and new avenues of recovery.

Observers may disagree about whether the Texas Supreme Court's recent decisions, which fashion new remedies, represent long overdue reforms or unwise judicial usurpation of the legislature's prerogative. However, both the judicial and the legislative branches of our state government must reduce the uncertainty litigants face in medical professional liability cases. Otherwise, insurers will continue to be unable to offer coverage at affordable rates because of the difficulty of estimating risk.

MICHAEL G. YOUNG, JD
TMA Staff Attorney

REFERENCES

1. Floyd v State, 29 Tex Crim 341, 343, 15 SW 819, 820 (1890).
2. Perdue, The Law of Texas Medical Malpractice, 22 Hous L. Rev 1, 12 (2d ed 1985).
3. Moss v Rishworth, 222 SW 225, 226 (Tex Comm'n App 1920, holding approved).
4. Moos v United States, 225 F2d 705, 706 (8th Cir 1955).
5. Wilson v Scott 412 SW2d 299, 301 (Tex 1967).
6. Tex Rev Civ Stat Ann, art 4590i, sec. 6.02 (Vernon Supp 1986).
7. Morris RC, Moritz AR: Doctor and Patient and the Law, ed 5. St Louis, The C.V. Mosby Company, 1971, p 326.
8. Tex Bus & Com Code Ann, sec 26.01(b)(8) (Vernon Supp 1986).
9. Graham v Gautier, 21 Tex 111 (1858).
10. Snow v Bond, 438 SW2d 549, 550 (Tex 1969).
11. Cloys v Turbin, 608 SW2d 697, 700 (Tex Civ App—Dallas 1980, no writ).
12. Childs v Weis, 440 SW2d 104, 107 (Tex Civ App—Dallas 1969, no writ).
13. Gravis v Physicians and Surgeons Hospital of Alice, 427 SW2d 310, 311 (Tex 1968).
14. Weiser v Hampton, 445 SW2d 224, 230-1 (Tex Civ App—Houston [1st Dist] 1969, writ ref'd nre).
15. Turner v Stoker, 289 SW 190, 194 (Tex Civ App—Eastland 1926, writ ref'd) and Bowles v Bourdon, 213 SW2d 713, 715 (Tex Civ App—Galveston 1948) aff'd, 148 Tex 1, 219 SW2d 779 (1949).
16. King v Flamm, 442 SW2d 679, 681 (Tex 1969).
17. Speer v United States, 512 F. Supp 670, 675 (ND Tex), aff'd 675 F2d 100 (5th Cir 1981).
18. Hood v Phillips, 554 SW2d 160, 165, (Tex 1977).
19. Williams v Bennett, 610 SW2d 144, 146 (Tex 1980).
20. Hersh v Hendley, 626 SW2d 151 (Tex App—Fort Worth 1981, no writ).
21. Turner v Stoker, 289 SW 190, 194 (Tex Civ App—Eastland 1926, writ ref'd).
22. Webb v Jorns, 488 SW2d 407, 411 (Tex 1972).
23. Henderson v Mason, 386 SW2d 879, 882 (Tex Civ App—El Paso 1964, no writ).
24. 3 STATE BAR OF TEXAS, Texas Pattern Jury Charges PJC 40.01 (1982).
25. Bowles v Bourdon, 219 SW2d 779, 782 (Tex 1949).
26. Hilzendager v Methodist Hospital, 596 SW2d 284, 287 (Tex Civ App—Houston [1st Dist] 1980, no writ).
27. Kieswetter v Center Pavillion Hospital, 662 SW2d 24, 27 (Tex Civ App—Houston [1st Dist] 1983, no writ).
28. Emanuel v Bacon, 615 SW2d 847, 851 (Tex Civ App—Houston [1st Dist] 1981, writ ref'd nre).
29. Tex Jur 3d Damages, sec. 87 (1983).
30. Tex Civ Practice & Remedies Code sec 71.002 (Vernon 1986).
31. Tex Rev Civ Stat Ann art 8306, sec 16 (Vernon 1967).
32. Davis v Marshall, 603 SW2d 359 (Tex Civ App—Houston [14th Dist] 1980, writ ref'd nre).
33. Hofer v Lavender, 679 SW2d 470, 475 (Tex 1984).

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

TAKE ADVANTAGE OF OUR SPECIAL MEDICAL LEASE RATES.

1987 325 **$290.73** per mo.	1987 528ea **$328.11** per mo.	1987 535is **$484.91** per mo.
1987 635csi **$660.78** per mo.	1987 735i **$577.37** per mo.	

Over 150 new BMW's to choose from. All with A.B.S. brakes, 3 year/36,000 mile warranty and 24 hour emergency roadside service.

Prices based an a 60 manth clased end lease. Custamer ta pay first manth's payment, security depasit, tax, title and license fees at inceptian af cantract.

the New BMW

BMW CENTER

FACTORY AUTHORIZED.
4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

AIM HIGH

AIR FORCE MEDICINE

AN ATTRACTIVE ALTERNATIVE TO PRIVATE PRACTICE

Are you sick of the paperwork battle? Are you more familiar with the latest computer technologies instead of those of your specialty? Are supply and equipment problems getting you down?

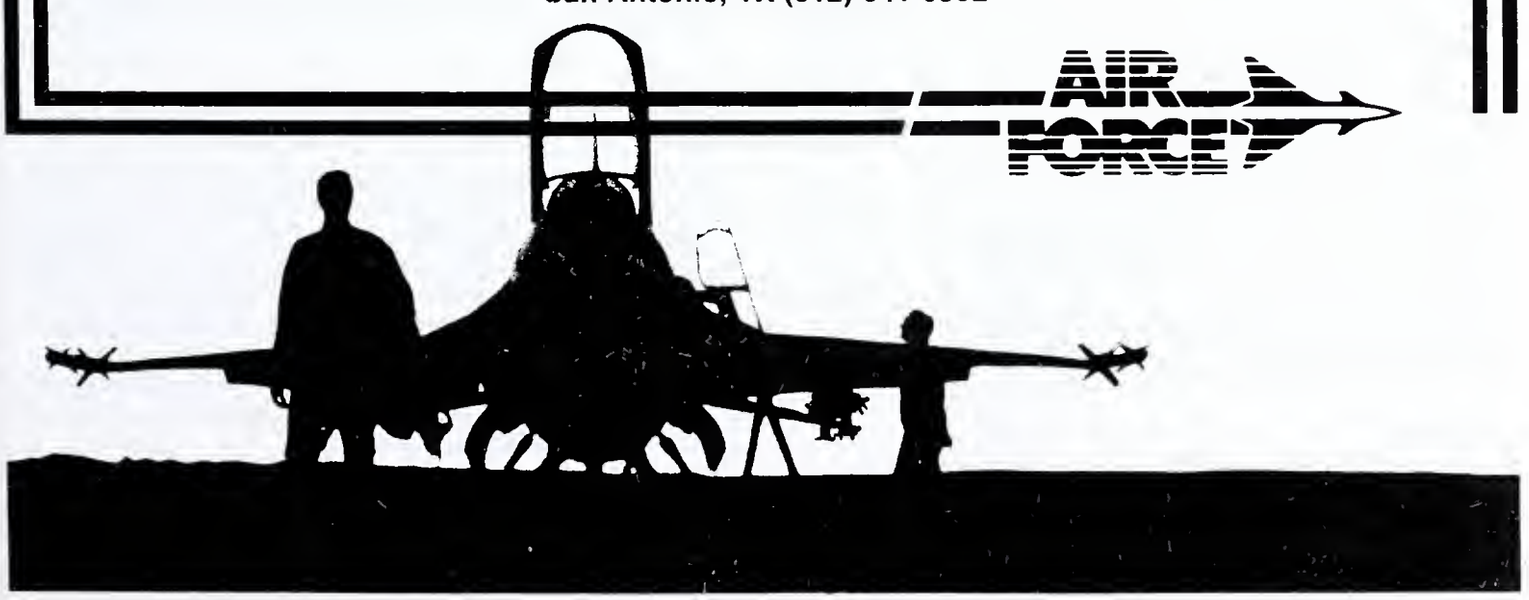
Join the Air Force medical team. Concentrate on your medical practice. Leave the paperwork hassle to others. We use the group practice system of health care. It allows maximum patient/physician contact with a minimum of administrative responsibilities.

You'll get to use those skills you've gained through the years of education; to stay up with new methods and techniques; and, if qualified, to specialize.

Our superior employment and benefits package make Air Force medicine an attractive alternative to private practice. Find out how you can be a part of the Air Force health care team. Call

Houston, TX (713) 784-3132
Dallas, TX (817) 640-6469
San Antonio, TX (512) 341-6802

AIR FORCE



D.H. Boals
David H. Boals, MD, 69, died Sept 17, 1986. A retired physician, Dr Boals practiced radiology in Port Arthur from 1970 until May 1986.

He was born in Tiffin, Ohio, and earned a bachelor of arts degree from Ohio State University in Columbus in 1940. During 1940-1946, he served in the US Army, attaining the rank of major. Following military service, Dr Boals entered Boston University School of Medicine. Graduation in 1951 was followed by an internship at Detroit Receiving Hospital. Dr Boals maintained a general practice in Norwalk, Ohio, from 1953 until 1966. At that time, he began a residency in radiology at Baylor Affiliated Hospitals in Houston, and in 1970 began practicing in Port Arthur.

Surviving family members include his wife, Margaret H. Boals, Groves, Tex; daughter, Sandra B. Hopkinson, Lawrence, Mass; stepdaughter, Carol F. Eichinger, Middletown, NJ; and stepson, James R. Frantz, St Charles, Mo.

E.L. Gabet
Edward Louis Gabet, MD, 69, a Houston resident for 40 years, died Oct 25, 1986.

Born in Shamokin, Pa, Dr Gabet attended the University of Houston. In 1957 he graduated from The University of Texas Medical Branch at Galveston and then returned to Houston for an internship at Memorial Hospital and a residency in internal medicine at Hermann Hospital. Dr Gabet remained in Houston, practicing internal medicine.

He is survived by his daughter, Joan C. Raposa, Woodlands, Tex; son, Edward Louis Gabet, Jr, San Francisco; sisters, Mary Brown, Louise Neary, and Isabel Orzech, all of Lancaster, Pa; and one granddaughter.

J.P. Gibson
John P. Gibson, MD, an Abilene pediatrician and honorary member of Texas Medical Association, died Oct 3, 1986. He was 83.

Born in Lawton, Okla, Dr Gibson was a 1925 graduate of Abilene Christian College and a 1929 graduate of George Washington University School of Medicine. After an internship at Sibley Memorial Hospital in Washington, DC, he returned to Lawton to serve a residency at the Kiowa Indian government hospital. In 1933 Dr Gibson moved to Abilene to teach at Abilene Christian College and to head the department of student health at the college.

Dr Gibson practiced in Abilene 44 years. He served as president of the Taylor-Jones County Medical Society and as chief of staff at Hendrick Memorial and St Ann hospitals.

He is survived by his wife, Esther Gibson, Abilene; daughters, Mrs Harvey Porter, Albuquerque, NM, and Mrs Ray Beeson, Dothan, Ala; son, David Gibson, Commerce, Tex; and brother, Richard Gibson, Boonsboro, Md.

F.R. Green
F. Ray Green, MD, a retired Dallas physician and honorary member of Texas Medical Association, died Oct 11, 1986, at age 79.

Dr Green was born in Fostoria, Tex. He was a 1935 graduate of Baylor College of Medicine. After completing an internship at St Joseph Hospital in Fort Worth, Dr Green practiced in Sudan, Tex, until 1942. He then began a general practice in Dallas, which he continued until his retirement in 1985.

Surviving family members include his son, James Ray Green, Garland, Tex; daughters, Jean Ann Barnett, Garland, and Patricia Maree Stewart, Cedar Creek Lake, Tex; brother, Tim R. Green, MD, Dallas; ten grandchildren; and seven great-grandchildren.

L.L. Griffin
Lawrence L. Griffin, MD, 72, died Oct 4, 1986. Dr Griffin was an orthopedic surgeon in Austin from 1948 until his retirement in 1978.

He was born in Cisco, Tex, and was a 1937 graduate of The University of Texas Medical Branch at Galveston. He served in the US Army Medical Corps from 1940 to 1945 and trained at the Willis C. Campbell Clinic in Memphis after World War II. Before moving to Austin in 1948, Dr Griffin completed training in orthopedic surgery at the University of Tennessee.

Surviving family members include his daughter, Betty Ball, Dallas; sons, Lawrence L. Griffin, Jr, Galveston, and J. Edward Griffin, Corpus Christi, Tex; sisters, Elna Bobbitt, Baytown, Tex, and Billie Hamblen, La Porte, Tex; nine grandchildren; and one great-grandchild.

M.D. Hanson
Minter D. Hanson, MD, 80, an honorary member of Texas Medical Association, died Oct 23, 1986. A Huntsville resident, Dr Hanson was the former medical director for the Texas Department of Corrections (TDC).

A native of Cleveland, Tex, Dr Hanson had lived in Huntsville since 1938. He was a 1932 graduate of The University of Texas Medical Branch at Galveston. After an internship in South Bend, Ind, Dr Hanson practiced in Wichita Falls. He moved to Huntsville in 1938. He served as a TDC physician until 1971. During 1945–1946, Dr Hanson was president of the Tri-County Medical Society.

He is survived by his wife, Nathalie Hanson, and son, Joseph Hanson, both of Huntsville; and brother, Rayburn Hanson, Cleveland, Tex.

W.A. King
William A. King, MD, 60, a Texarkana psychiatrist, died Oct 9, 1986.

Dr King, a native of Aspermont, Tex, received his premedical education at Hardin-Simmons University in Abilene. In 1954 he graduated from Baylor College of Medicine and then interned in Rockford, Ill. He returned to Texas for a residency at Gregg County Memorial Hospital in Longview. He began his medical practice in Omaha, Neb. In 1972 he entered the psychiatry residency at Nebraska Psychiatric Institute in Omaha. Upon completion, he was psychiatric director of the State Hospital in Hasting, Neb, for one year. He began his private practice of psychiatry in Texarkana in 1976.

Active in the Texas Medical Association, Dr King served as a member of the association's board of councilors and as a delegate to the TMA from Bowie County Medical Society.

Survivors include his wife, Sue King, Texarkana; sons, Carter

King, Texarkana; William A. King, Jr, New Orleans; and Robert Jeffrey King, Austin, Tex; stepson, Larry Talley, Jr, Georgetown, Colo; daughters, Karen King, Elizabeth Mallow, and Virginia Sager, all of Dallas; sister, Ludelle Bolton, Houston; and seven grandchildren.

H. Kleiman

Harold Kleiman, MD, 61, a urologist practicing in Victoria, Tex, died Oct 25, 1986.

Dr Kleiman was born in Cisco, Tex, and attended Texas A&M University. In 1951 he graduated from The University of Texas Medical Branch at Galveston. His internship and residency were at the medical school in Galveston. Dr Kleiman began his medical practice in Victoria in 1955.

During 1944–1946, he served in the US Navy.

Dr Kleiman is survived by his wife, Shirley Kleiman, Victoria; sons, Dr Michael Kleiman, Tampa, Fla, and Dr David Kleiman, Arlington, Tex; and daughter, Laurie Kleiman, Dallas.

M.S. Rednick

Meyer S. Rednick, MD, an honorary member of Texas Medical Association, died Oct 4, 1986, at age 88. Dr Rednick was a Houston physician for 28 years.

He was born in London, and attended the University of Pennsylvania. He graduated from the University of New York College of Medicine in 1923. A cardiologist, Dr Rednick practiced in New York before moving to Houston in 1952.

He is survived by his wife, Shirley Rednick, and son, Richard Rednick, both of Houston; sisters, Lillian Simon, Flushing, NY, and Irene Kushnick, Los Angeles; and brother, David Rednick, Rye, NY.

J.A. Shepperd

Joe Arthur Shepperd, MD, 74, a longtime resident of Burnet County, died Oct 23, 1986.

Dr Sheppered was born in Thornton, Tex, and attended The University of Texas at Austin. In 1935 he graduated from Baylor College of Medicine in Dallas. After an internship at St Paul Hospital in Dallas, Dr Shepperd moved to Burnet, Tex, in 1937. He later established Shepperd Memorial Hospital and seved as president of the Texas Small Hospital and Clinics Association.

Active in civic affairs, Dr Shepperd served as mayor of Burnet for 16 years.

Surviving family members include his wife, Epifania Shepperd, Burnet; sons, Joseph Arthur Shepperd, Jr, Austin, Tex, and Juan Octavio Shepperd, Burnet; daughters, Suzanne Van der Pohl, Bridgeport, Conn, and Maria Elena Shepperd, Burnet; brothers, Ray Shepperd, MD, Burnet, and Ivan Shepperd, MD, Marble Falls, Tex; sister, Dora Nell Kauffman, Georgetown, Tex; seven grandchildren; and three great-grandchildren.

W.B. Spencer

W. Bruce Spencer, MD, 63, a longtime Waco physician, died Oct 24, 1986.

Dr Spencer was born in Ralls, Tex, and attended Texas Tech University and The University of Texas at Austin. He graduated from The University of Texas Medical Branch in 1946, and then interned at St Joseph's Hospital in Fort Worth. During World War II, Dr Spencer served in the Air Force as a flight surgeon. In 1953 he received his master of public health degree from Johns Hopkins University. He practiced in Waco from 1957 until his retirement in July 1986.

Dr Spencer is survived by his wife, Margaret Spencer, Waco; stepdaughters, Susan Young, Columbus, Ohio, and Debbie Mings, Waco; sons, John Spencer, Miami, Fla, and Bobby Spencer, Arlington, Tex; sister, Jean Anderson, Lamesa, Tex; and four grandchildren.

H.C. Thomas

Hiram Curtis Thomas, MD, a retired Fort Worth family physician, died Oct 2, 1986, at age 83.

Dr Thomas was born in Corsicana, Tex, and attended The University of Texas at Austin. In 1930 he graduated from The University of Texas Medical Branch at Galveston and then interned at Kansas City General Hospital. He began his practice in Fort Worth in 1932.

Surviving family members include his wife, Alla Hanes Thomas, Fort Worth; son, Richard Green, Dallas; daughter, Kan Vernon, Spearman, Tex; brothers, Jessie Thomas, Greenwich, Conn, and Lewis Thomas, Corsicana, Tex; sister, Pherba Walker, Tallahassee, Fla; seven grandchildren; and four great-grandchildren.

C.E. Wysong

Charley E. Wysong, MD, 71, a Collin County physician and humanitarian, died Oct 9, 1986.

Dr Wysong was born in Melissa, Tex, and received his undergraduate education at The University of Texas at Austin. After graduating from Baylor College of Medicine in 1939, he served a rotating internship and residency in obstetrics and gynecology at Jefferson Davis Hospital in Houston. During World War II, Dr Wysong served with the US Army Air Corps in Enid, Okla, attaining the rank of captain.

In 1946 he joined the medical practice of his father and two brothers, and in 1961 the four doctors were responsible for the construction of the Wysong Hospital in McKinney. Dr Wysong was instrumental in building a new clinic in 1977. In 1978 the three brothers established the Wysong Foundation, Inc, which issued bonds to build a modern hospital, the Wysong Memorial Hospital, completed in 1980.

Along with his private practice, Dr Wysong served as chief medical officer for the City of McKinney and assisted in the formation of the Emergency Medical Services Division of the McKinney Fire Department. Appointed by Gov Preston Smith, he served on the Texas State Board of Medical Examiners for 14 years. He also served as president of the Collin County Medical Society for two terms.

Surviving Dr Wysong are his wife, Mary Weatherly Wysong; son, Brad Wysong, MD; brother, Dudley Wysong, MD; and two grandchildren, all of McKinney.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

D. H. BOALS
Port Arthur, 1917–1986

E. L. GABET
Houston, 1916–1986

J. P. GIBSON
Abilene, 1903–1986

F. R. GREEN
Dallas, 1906–1986

L. L. GRIFFIN
Austin, 1913–1986

M. D. HANSON
Huntsville, 1906–1986

W. A. KING
Texarkana, 1926–1986

H. KLEIMAN
Victoria, 1925–1986

M. S. REDNICK
Houston, 1898–1986

J. A. SHEPPERD
Burnet, 1911–1986

W. B. SPENCER
Waco, 1923–1986

H. C. THOMAS
Fort Worth, 1902–1986

C. E. WYSONG
McKinney, 1915–1986

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audio-visual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student $ 5.00 ☐ Patron $ 100.00
☐ Sustaining $15.00 ☐ Life $1,000.00
☐ Subscribing $25.00

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

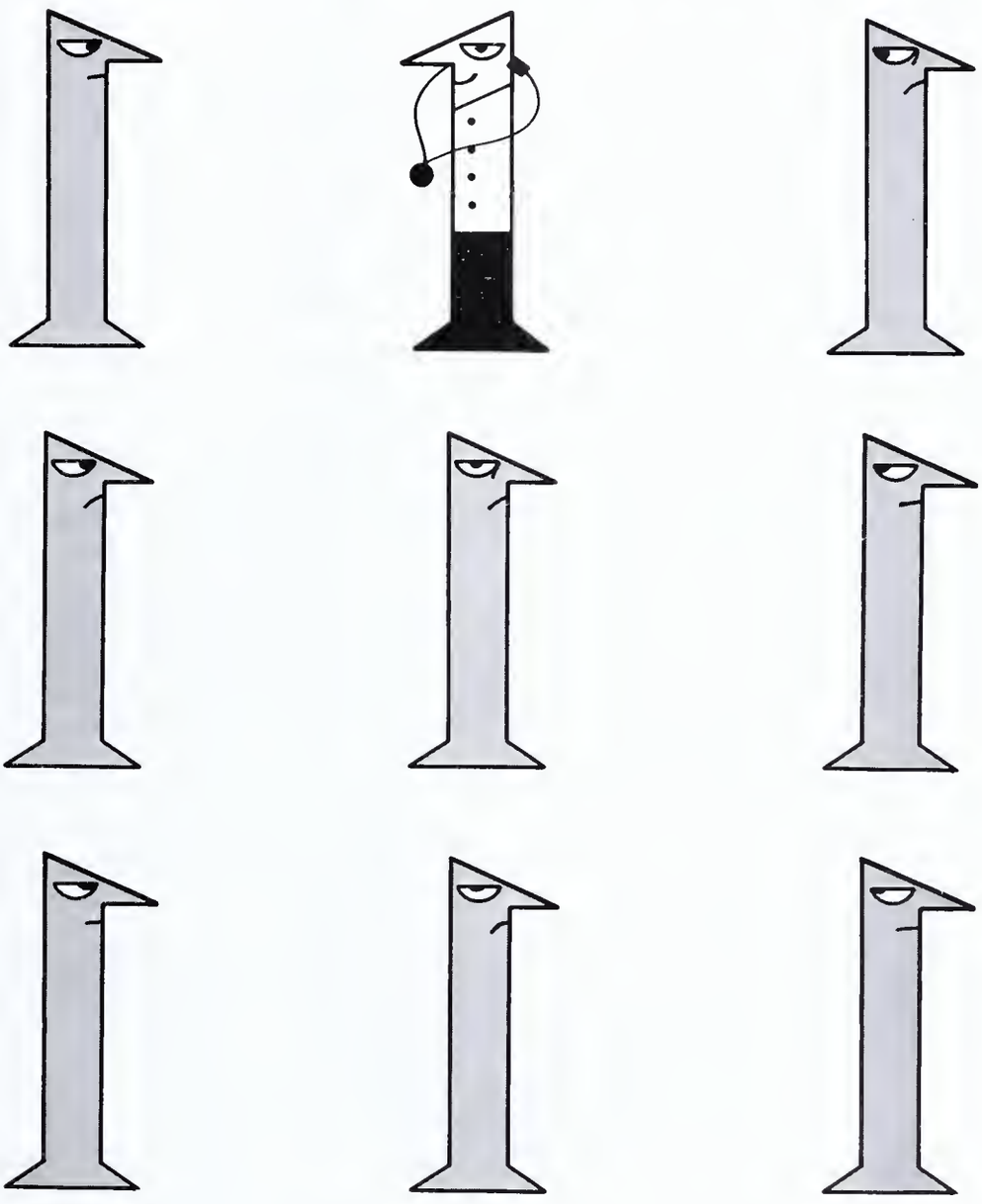
OCCASION _____

PLEASE NOTIFY:

_____

_____

WE'RE THE ONE



AND ONLY auto leasing company endorsed by both the Texas Medical Association and the Tarrant County Medical Society, with good reason. Call our toll-free number for more information.

1-800-442-6158

TRANS-TEXAS LEASING
9330 LBJ Frwy, Suite 635
Dallas, TX 75243
1-214-699-9494

Medicine in Literature this month presents a list of some of the newest audiovisual programs in the TMA Memorial Library. The holdings include audiotape cassettes, 16 mm films for showing to groups, 35 mm slide sets for study and teaching, and many new half-inch VHS videocassettes for continuing medical education and patient instruction. The library adds about 100 new titles to the AV collection each year. If you do not find what you need here or in the Audiovisuals Catalog *please contact the Audiovisual Coordinator at (512)477–6704, ext 195.*

Audiotape cassettes

Johns Hopkins Medical Grand Rounds, 5 issues published each academic year, 4 cassettes in each issue. Johns Hopkins University School of Medicine, 1986-87.

Medical Spanish: A Conversational Approach. 12 tapes, study guide and text. Audio-Forum, Jeffrey Norton Publishers, Inc, 1981.

Return to Intimacy. Series of 24 tapes by Terry Kellogg dealing with alcoholism, relationships, codependency, feelings, sexuality, and dysfunctional family systems, 1986.

Motion picture films

AIDS: What Everyone Needs to Know (educational program for general public). 18 min. Churchill Films, 1986.

Accidents Don't Have to Happen (teaches precautions that can prevent accidents involving young children). 12 min. Professional Research, Inc, 1986.

Immunizations (emphasizes importance of immunizations for children). 10 min. Professional Research, Inc. 1986.

The Fitness Formula (Dr George Sheehan promotes rewards of healthful, physically active life.) 24 min. Teaching Films, Inc. 1984.

Staying Active: Wellness After Sixty. 28 min. Spectrum, 1985.

Slide sets

Acquired Immune Deficiency Syndrome, Part I: Epidemiology, Virology & Immunology. 59 slides, 1 audiotape and study guide. Medcom, Inc. 1986.

Acquired Immune Deficiency Syndrome, Part II: Infection Control. 80 slides, 1 audiotape, and study guide. Medcom, Inc. 1986.

Coping With Your Allergies at Home, at School, and on the Job. 40 slides and 1 audiotape. National Audiovisual Center, 1983.

Hearing Loss and Rehabilitation. 55 slides. American Academy of Otolaryngology, 1985.

Intestinal Helminths. 129 slides and study guide. American Society of Clinical Pathologists, 1984.

Ophthalmic Ultrasound, Part I: Ocular Abnormalities. 54 slides, 1 audiotape, and study guide. Medcom, Inc, 1983.

Tobacco Linked Diseases. 80 slides, 2 audiotapes. Medcom, Inc, 1983.

VHS videocassettes

Ages: A Multidisciplinary Approach—NCME Tape #478. 49 min. Network for Continuing Medical Education, 1986.

Alzheimer's Disease: A Clinical Approach—NCME Tape #490. 50 min. Network for Continuing Medical Education, 1987.

Asymptomatic Hypertension—NCME Tape #480. 43 min. Network for Continuing Medical Education, 1986.

Beyond Fear (a public education program about AIDS). 50 min. The Red Cross, 1986.

Breast Cancer (AMA Video Clinic). 2 hours. American Medical Association, 1985.

Cancer Screening: the Most Effective Cure—NCME Tape #481. 48 min. Network for Continuing Medical Education, 1986.

Common Psychiatric Disorders in Children and Adolescents—NCME Tape #474. 48 min. Network for Continuing Medical Education, 1986.

Coping With Stress (general public health education). 18 min. Professional Research, Inc, 1980.

Living With I.B.D. (patient education for coping with inflammatory bowel disease). 21 min. National Foundation for Ileitis and Colitis, 1984.

Management of Chronic Pain—NCME Tape #486. 50 min. Network for Continuing Medical Education, 1986.

The National Alcoholism Test (asks the viewer questions about his or her use of alcohol; helps identify problems of alcoholism). 22 min. Johns Hopkins University and Public Service Video, 1985.

Osteoporosis: Balancing Bone Resorption and Bone Formation—NCME Tape #484. 50 min. Network for Continuing Medical Education, 1986.

Prevention of Stroke: Look at the Risk Factors—NCME Tape #470. 48 min. Network for Continuing Medical Education, 1986.

Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

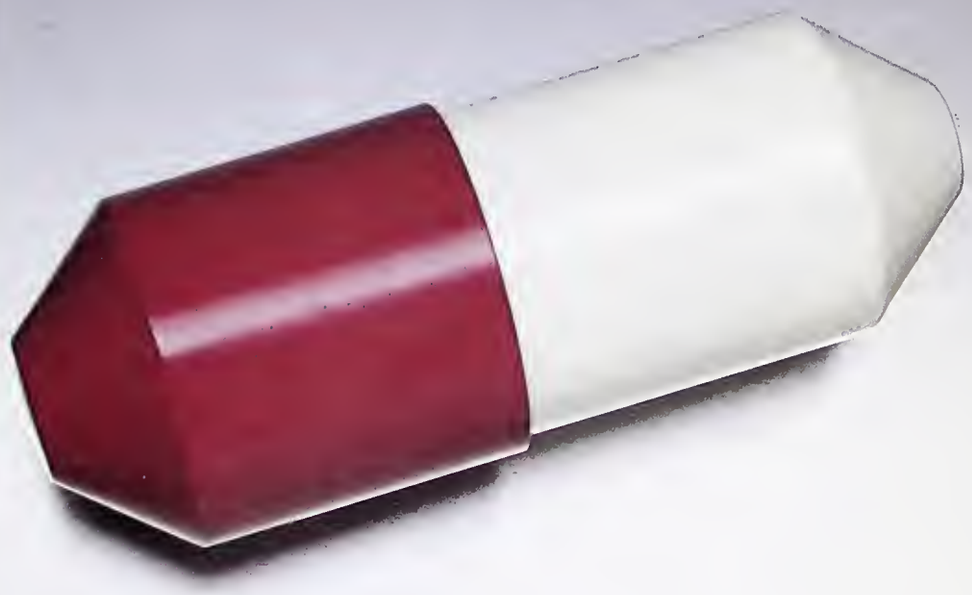
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ L42

In Hypertension*... When You Need to Conserve K^+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).



Potassium-Sparing

DYAZIDE®

25 mg Hydrochlorothiazide/**50 mg** Triamterene/SKF

Over 20 Years of Confidence

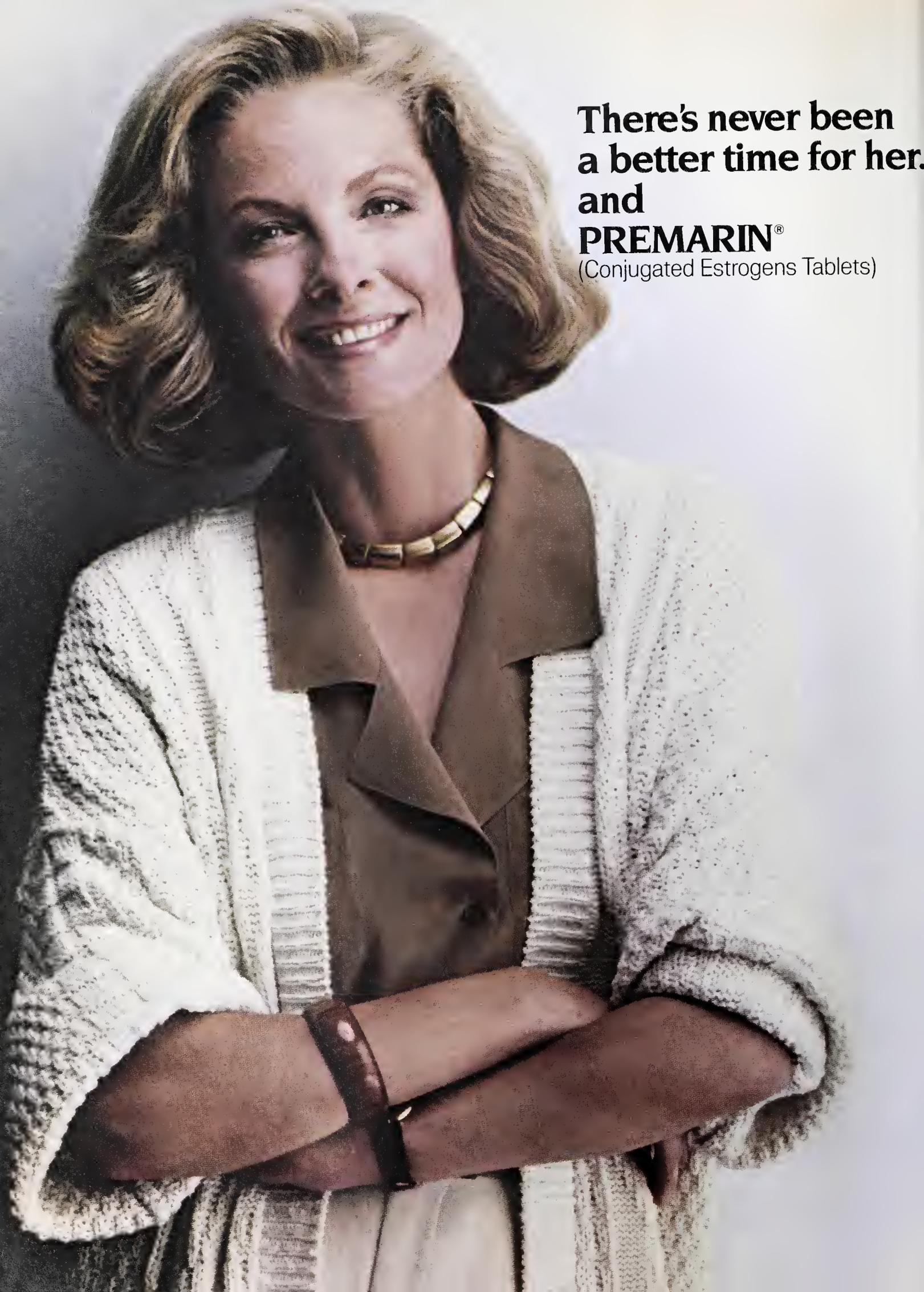
The unique red and white Dyazide® capsule: Your assurance of SK&F quality.

a product of

SK&F CO.

Carolina, P.R 00630

©SK&F Co., 1983



There's never been a better time for her. and PREMARIN®
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.[1-4] The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.[5]

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms

PREMARIN®
(Conjugated Estrogens Tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

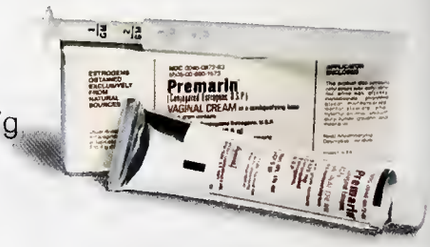
The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(Conjugated Estrogens)

Vaginal Cream

0.625mg/g



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.
2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.
The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) **Osteoporosis (abnormally low bone mass).** Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy. (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nontatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment, increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate to severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically:* Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Whitehead MI, Townsend PT, Pryse-Davies J, et al: Effects of estrogens and progestins on the biochemistry and morphology of the postmenopausal endometrium. *N Engl J Med* 1981;305:1599-1605. **2.** Paterson MEL, Wade-Evans T, Sturdee DW, et al: Endometrial disease after treatment with oestrogens and progestogens in the climacteric. *Br Med J* 1980;280:822-824. **3.** Magos AL, Brincat M, Studd JWW, et al: Amenorrhea and endometrial atrophy with continuous oral estrogen and progestogen therapy in postmenopausal women. *Obstet Gynecol* 1985; 67: 496-499. **4.** Whitehead MI, Lane G, Siddle N, et al: Avoidance of endometrial hyperstimulation in estrogen-treated postmenopausal women. *Semin Reprod Endocrinol* 1983;1:1;41-52. **5.** Barnes RB, Roy S, Lobo RA: Comparison of lipid and androgen levels after conjugated estrogen or depo-medroxyprogesterone acetate treatment in postmenopausal women. *Obstet Gynecol* 1985;66:216-219.

© 1986 Ayerst Laboratories

Ayerst® AYERST LABORATORIES
New York, NY 10017

T6194/BB6

Motrin® 800 TABLETS mg

ibuprofen

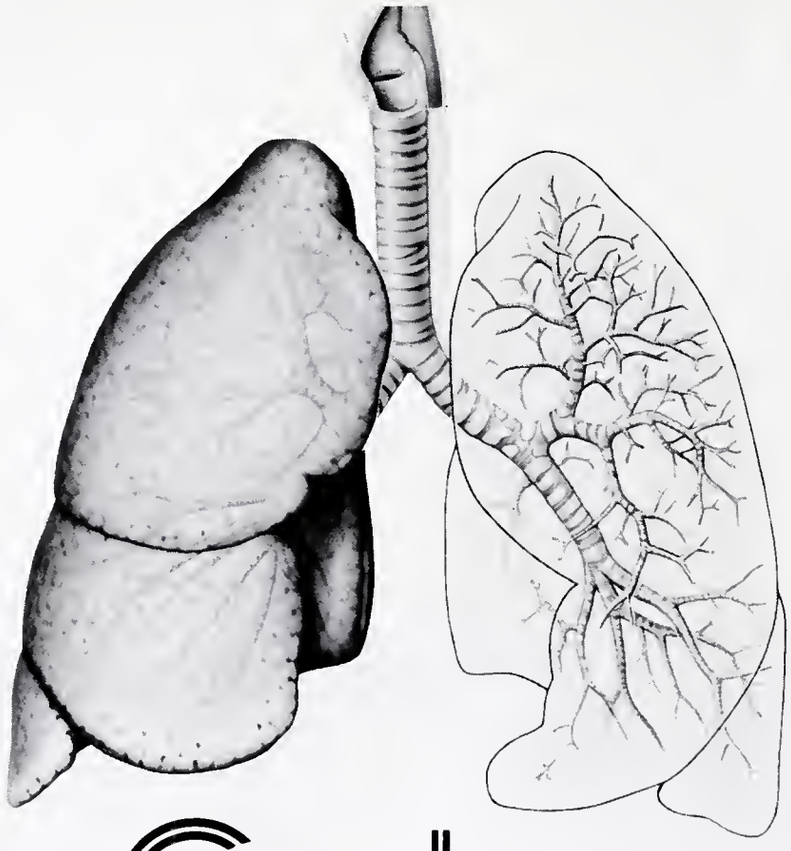
Extra strength
Convenience
Economy

Upjohn 100 A Century of Caring 1886·1986

©1986 The Upjohn Company

J-6138 January 1986

Consider the causative organisms...



Ceclor®
cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae, H influenzae, Streptococcus pneumoniae, Streptococcus pyogenes
(ampicillin-susceptible) (ampicillin-resistant)

Note: Ceclor® is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae, Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci).

Contraindications: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- In renal impairment, safe dosage of Ceclor may be lower than that usually recommended. Ceclor should be administered with caution in such patients.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, erythema multiforme, serum-sickness-like reactions): 1.5%; usually subside within a few days after cessation of therapy. These reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children)
- Abnormal urinalysis; elevations in BUN or serum creatinine
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly)

© 1986, ELI LILLY AND COMPANY [060485LR]

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

600332

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
DIRECTOR-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY

James A. Knight, MD
PSYCHIATRY

R. John Prevost, MS
AIR POLLUTION

Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES

John A. Thomas, PhD
BIOMETRICS

Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES

Hester Beth Bland, HSD
HEALTH EDUCATION

George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

A. J. LANIER, JR, MD
Diplomate American Board of Anesthesiology
Cervical, thoracic, and lumbar epidural steroid injection, cervical sympathetic, celiac plexus, and lumbar sympathetic blocks, differential spinal and neurolytic nerve blocks.

8350 Meadow Road, #250, Dallas, Texas 75231; 214 691-6885

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7558

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, bio-feedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite 8-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
Colon and Rectal Surgery Colonoscopy
Laser Hemorrhoidectomy, Out-patient or In-patient

Barnett Tower, Baylor Medical Plaza, 3600 Gaston Avenue, Suite 411, Dallas, Texas 75246; 214 821-4300, 350-2441
122 W. Colorado, Dallas, Texas 75208; 214 942-8734

Representing the Profession

. . . Another service of your association

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism

Practice Limited to Endocrinology & Diabetes
5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service
. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery

DAVID J. ZEHR, MD—Microsurgery

ARNOLD V. DiBELLA, MD

Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA

Diplomates American Board of Orthopaedic Surgery

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops
. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery

JACINTO ZAMBRANO, MD
Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone 817 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3800 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite B116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
W. Robert Hudgins, MD
Richard H. Jackson, MD
Mark J. Cwikla, MD
Casey E. Patterson, MD (Retired)

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620, Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905; Dallas, Texas 75231; 214 369-7596

1302 Lane St., Copper Tree Medical Center, Suite 300, Irving, Texas 75062; 214 259-4768

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA
Diplomates of the American Board of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

TMA HealthWise Series
. . . Another service of your association

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Computerized Tomography

John T. O'Neal, MD, Neurosurgery
Robert D. Schneider, MD, Neurology and Electroencephalography
Steven K. Crouse, MD, Neurology and Electroencephalography

Murchison Medical Bldg., Suite 307
1810 Murchison Drive, El Paso, Texas 79902
Telephone 915 532-8901

ARLINGTON ASSOCIATION OF NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 77054
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

ONCOLOGY

HEMATOLOGY-ONCOLOGY ASSOCIATES OF HOUSTON, PA
Gary B. Fleishman, MD
Joel W. Abramowitz, MD, PhD
Diplomates of the American Boards of Internal Medicine & Medical Oncology
Diplomate of the American Board of Hematology (JWA)
909 Frostwood, Suite 120, Houston, TX 77024; 713 467-1630
6565 DeMoss, Suite 211, Houston, TX 77074; 713 270-1188

TMA Action monthly newsletter
. . . Another service of your association

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES

Albert Vaiser, MD
William 8. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
8radley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or 800 872-2020
3600 Gaston Avenue, Dallas, Texas 7S246; 214 821-4S40

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 7S204
214 S21-11S3; 1-800-442-S376

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. 8aum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-714S

7647 8ellfort, Suite One, Houston, 1exas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 5S6-S7S7

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 7820S; S12 226-S191

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American 8oard of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 91S S4S-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite S03, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 8inz, Suite 400, Houston, Texas 77004;
1-800-833-S921 or 713 S24-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

TMA Physician Membership Directory
. . . Another service of your association

PEDIATRIC OPHTHALMOLOGY OF HOUSTON

Monte I. Stavis, MD
Pediatric ophthalmology and adult strabismus

7S00 8eechnut, Suite 130, Houston, Texas 77074
713 270-4S00

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert 8. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. 8loome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan 8randon, MD, FACS, FICS

Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD

Houston Eye Associates 8uilding, 285S Gramercy, Houston, Texas
7702S; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas
770S7; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

BRAZOSPORT EYE INSTITUTE

Frank J. Grady, MD, PhD, FACS

Surgical Correction of Nearsightedness and Astigmatism

103 Parking Way, Lake Jackson, Texas 77S66; 1-800-392-0091

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. 8ruck, MD
W. Z. 8urkhead, Jr., MD
Richard D. Shubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 7S204; 214 S21-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 33S-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

TMA Physicians Benevolent Fund
. . . Another service of your association

F. Carlton Hodges, MD
J. Price 8rock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American 8oard of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 79S-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. 8endel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American 8oard of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John 8. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. 8rodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
834S Walnut Hill Lane, Suite 10S, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 7523S; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA

ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. 8lumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American 8oard of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 91S 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 91S 592-8666

TMA 1987 Calendar of Events

Winter Conference, Austin, February 6

Annual Session, Houston, May 13-17

Fall Conference, Austin, September 26

Interim Session, Austin, November 20-21

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES

Dorothy Patras, MD

Anatomic Pathology and Consultation in Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. 8ox 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.

J. S. Wilkenfeld, MD
Diplomate of the American 8oard of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. 8ox 55008, Houston, Texas 770S5; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

AUSTIN PATHOLOGY ASSOCIATES MEDICAL PARKWAY CLINICAL LABORATORY

Anatomic and Clinical Pathology, Electron Microscopy, Cytology and Dermatopathology

Computerized Results Reporting With Telecommunications Available

A. Q. Da Silva, MD
Donald A. Parsons, MD
William J. Reitmeyer, MD
Paul A. Le8ourgeois, MD
Phillip C. Collins, MD
David R. Ralph, MD

RENAL PATHOLOGY: Gerald A. 8eathard, MD

Main Lab: 711 W. 38th Street—Suite C-11, Austin, Texas 7870S
Mailing Address: P.O. 8ox 9806, Austin, Texas 78766-0806
Telephone: S12 452-2S29

Specimens: Mail to Main Lab
Office Pickup Service in Austin Area

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. 8ox S8, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. 8rowne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American 8oard of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 7820S; Telephone S12 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. 8rauer, MD, FACS
Thomas M. 8iggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American 8oard of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 79S-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James 8. Stafford, IV, MD, FACS
David A. Lee, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 7S0, Houston, Texas 77030; 713 79S-SS7S

Representing TMA's legislative views
. . . Another service of your association

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD
Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

WILLIAM E. BARNES, MD

Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 60B, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION

Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite S, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-8296

JAMES L. MOORE, MD, FACS, PA

Diplomate American Board of Plastic Surgery

Plastic and Reconstructive Surgery

1200 Binz, Suite 730
Houston, Texas 77004; 713 526-6161

PLASTIC SURGERY CLINIC OF AUSTIN

Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery
Jacinto Zambrano, MD
Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery
30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES

302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD

Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

COSMETIC AND RECONSTRUCTIVE PLASTIC SURGERY SPECIALISTS PA

Neal R. Reisman, MD, FACS
Mark D. Gilliland, MD
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
American Society Plastic and Reconstructive Surgery
American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

PSYCHIATRY

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 381-7181

TMA Postgraduate Courses
. . . Another service of your association

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; B17 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
B17 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 B23-4151

TMA Memorial Library

. . . Another service of your association

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS

Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; B17 332-7B7B

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 B27-3B90
Hours By Appointment

REGIONAL CARDIOVASCULAR CENTER

Cardiac, Vascular and Thoracic Surgery

Mario O. Kapusta, MD
Phillip R. Adams, MD

925 E. Dawson, Tyler, Texas 75701
214 593-9022

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
B17 336-5711

EUGENE R. TODD, MD, PA

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 755, Dallas, Texas 75246
214 B26-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS

Diplomate, American Board of Urology

Adult and Pediatric Urology

Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 6B7-4553

SOUTHWEST UROLOGY ASSOCIATES

Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology

221 W. Colorado, #440, Dallas, Texas 7520B; 214 94B-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Wanted—Dallas metro area physicians who have a Texas license to help with pre-enlistment physicals. Full-time pays $36,8B9 to $45,367 with Government benefits. Part-time pays daily rate of $125 for morning work. 214 767-5211 or 5212.

Assistant Biochemist who will study various aspects of gene expression in order to understand the mechanism of mos oncogene induced tumorigenesis. These include: Purification of mos protein kinase produced in yeast, *in vitro* processing of viral RNA of a temperature-sensitive mutant of Moloney murine sarcoma virus, effect of mos gene expression on the cellular metabolism and cytoskeleton in yeast and animal cells. Knowledgeable in 1) structural analysis of RNA such as fingerprinting; 2) *in vitro* RNA processing; 3) enzyme purification; 4) yeast metabolism; 5) DNA transfection; 6) high voltage paper-electrophoresis; 7) peptide synthesis, immunoblotting. Knowledgeable of RNA tumor viruses and oncogenes. Must have published papers in international scientific journals covering the areas of Biochemistry/Molecular Biology/Virology. PhD degree in Biochemistry/Molecular Biology or related field with five years training as Postdoctoral Fellow and or Research Associate. $30,000 annual salary. 40 hours/week. Contact Texas Employment Commission, Houston, Texas, or send resume to Texas Employment Commission, Placement Unit, Austin, Texas 78778. JO #4794104. Ad paid for by an equal employment opportunity employer.

The Division of Plastic Surgery at The University of Texas Medical School at Houston invites applications for an assistant professor of surgery. Candidates must be board certified with permanent Texas licensure, completion of training in an approved plastic surgical program, experience and skill in lab and clinical research, head and neck oncology and reconstruction, microsurgery and trauma. Send CV to: Donald H. Parks, MD, UT Medical School at Houston, 6431 Fannin, Suite 4.15B, Houston, Texas 77030. Telephone 713 792-5473. An equal opportunity employer. Women and minorities are encouraged to apply.

Physician—$56,856 plus up to $3,000 additional compensation subject to approval. Group health insurance plus all state benefits including retirement. Must be licensed in Texas as MD or DO. Contact Mexia State School, P.O. Box 1132, Mexia, Texas 76667. Phone 817 562-2B21. An equal opportunity/affirmative action employer and does not discriminate against the handicapped.

West Texas—Big Spring State Hospital. Psychiatrist, child psychiatrist and general physician positions available, board certified or eligible. Texas license required. JCAH fully accredited facility. Excellent benefit package including 40-hour work week, malpractice protection, retirement, and tax-sheltered income program. Beautiful, friendly sunbelt location. City of 25,000 with good schools and excellent housing. Contact Superintendent, Big Spring State Hospital, P.O. Box 231, Big Spring, Texas 79721-0231; 915 267-8216. An EO/AAE.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call B17 336-B600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 496B4; 1-800-253-1795.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Expanding 21 physician multispecialty group has two openings: Pediatrician and Active Family Practitioner. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 W 11th Place, Big Spring, Texas 79720.

Attention Gen/FP (including those with semi-retirement thoughts). Practice opportunity available on beautiful Lake Whitney located in Central Texas. Office space (new) and personnel furnished for up to one year. This offer is well suited for any level of practice so desired. Immediate area affords excellent deer, duck, dove and quail hunting. Good fishing and water recreation at front door. Reply in confidence to P.O. Box 45B, Whitney, Texas 76692.

Family Practice. Two areas of Texas seeking board certified family practitioners: Major metropolitan city of 225,000 and nearby community of 20,000. Community supported hospitals will provide free office space, income guarantee, practice-building support and other benefits. Contact Maureen Bragg, Summit Health Ltd., 1B00 Avenue of the Stars, Los Angeles, CA 90067; 213 201-4000.

Family practitioner is seeking an associate for a busy and growing practice in Lubbock. Opportunity to step into established patient population and expand with your own practice. Contact Maureen Bragg, Physician Recruitment, Summit Health Ltd., 1800 Avenue of the Stars, Los Angeles, CA 90067; 213 201-4000.

Family practice situation available for BC/BE, competent, family practice/general surgeon. Work in a clinic with adjoining small JCAH hospital with very excellent salary guarantee. Conveniently located in east Houston near the heavy industrial complex on the ship channel. See minor office surgical procedures from industrial injuries and private patients alike. Cryosurgery, mammogram, endoscopies, some HMO activity. Permanent position, fee-for-service, with free office space and nurse provided through the first year. An even better deal after first year. For further details, send CV or contact: John W. Nichols, MD, or Deaton Hospital, Inc., 208 North Main Street, Galena Park, Texas 77547; 713 672-6311.

Excellent opportunity to establish busy practice by replacing a retiring physician. Fully equipped general practice and minor surgery clinic established 14 years in Northeast Texas. Family practitioner BC or BE. Contact P.O. Box 234, Cleveland, Texas 7732B-0234.

Family physician needed to work for another physician in Temple, Texas, to provide medical services to patients including pediatrics, geriatrics, surgery, obstetrics/gynecology and emergency room. Comprehensive medical services for members of family on continuing basis. Examine patients; elicit and record information about patients' health; order or execute various tests and x-rays on patients' condition. Analyze, report and diagnose condition; administer treatments and medications. Vaccinate patients to immunize them from communicative disease. Refer patients to specialists when necessary. Must have one year's internship and three years' experience in family practice. Salary $55,000 per year, 40 hours per week. Apply at the Texas Employment Commission, Temple, Texas or send resume to Texas Employment Commission, TEC Building, Austin, Texas 7877B. JO #46405B1. Ad paid for by an equal employment opportunity employer.

Internal Medicine

General internist wanted to join busy North Dallas-Richardson practice. Associate retiring. Excellent opportunity for a well qualified internist with a desire for long term commitment. If you would like to become a respected member of this community, send your CV to George M. Markus, MD, 2175 Promenade Center, Richardson, Texas 750B0; telephone 214 235-2304.

Internal Medicine—Texas. Community of 7,500 people in Northeast Texas seeks an internal medicine specialist. Board certification or board eligible MD is required for this position. This is a solo practice with a complete financial package provided by a hospital. Interested applicants should write, including complete CV, to: Administrator, P.O. Box 549, Carthage, Texas 75633.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

OBG physician for 10 member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 7B5B6; 512 399-2443.

Pediatrics

Expanding 21 physician multispecialty group has two openings: Pediatrician and Active Family Practitioner. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Board certified or eligible, immediate opening for full term or locum tenens private practice position in Dallas-Fort Worth metroplex to aggressive professional. There are in-patient and out-patient services. Must be knowledgeable in ultrasound, special procedures and CT. Please reply to Ad-637, TEXAS MEDICINE, 1B01 North Lamar Blvd., Austin, Texas 7B701.

Other Opportunities

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an out-patient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129. Toll free in Texas 1-800-331-8472.

The Medical and Surgical Clinic of Sherman, Texas is currently expanding its multispecialty group to include specialists in pediatrics, ophthalmology and otolaryngology. Interested parties please contact Ron Marshall, Administrator, 214 893-5138 (collect).

Positions Available—Seeking BC/BE, OBG, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1B01 North Lamar Blvd., Austin, Texas 7B701. Call 512 477-6704, ext. 263. No charge to TMA members!

Arizona based physician recruitment firm has opportunities coast to coast. "Professionals working with professionals." Over 14 years experience. Call 602 990-B0B0, or send CV to: Mitchell & Associates, Inc., P.O. Box 1B04, Scottsdale, Arizona BS2S2.

Physician Opportunities—Sunbelt. We have unadvertised solo, group and hospital based opportunities for general practice and most specialties. Financial guarantees, benefit packages negotiable. Fee paid. Professionals serving professionals. Send CV or call Fred Brinker, 512 327-6944. Sanford Rose Associates, 1705 Capital of Texas Hwy. S, Suite 202, Austin, Texas 78746.

Pulmonary internist—BC/BE to join internal medicine group, South Texas. Excellent practice environment and compensation package. Send CV to: Valley Diagnostic Clinic, 2200 Haine Drive, Harlingen, Texas 78550, Attention: Amanda Fuhro, Personnel Director, 512 421-5199.

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or BE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78S39; 512 383-14B1.

Wanted—An aggressive physician to start new minor emergency clinic in East Texas. Send resume or call S. Nickerson, 409 846-4756.

Wanted—Doctors for areas throughout Texas and the Southwest. These are guaranteed situations. GP, FP and internist are especially needed. Both large and small communities are available. For further information please call Jerry Lewis collect at B17 776-4121 or send CV to Lewis Personnel, 1227 North Valley Mills, Waco, Texas 76710.

Internist and OBG needed. Work in well-equipped clinic only two minutes from the hospital. Unlimited opportunity with a minimum investment. Contact Clarence Miller, ERA-Consolidated Brokers, Inc., P.O. Box 1270, San Marcos, Texas 7B666; 512 353-1125.

Family practitioners/internists (board certified or board eligible) wanted for full or part-time positions in a primary care group. Flexible schedule, malpractice, competitive compensation. Write or call San Antonio Family Care Center, 6100 Bandera Road, Suite 300, San Antonio, Texas 7B23B; 512 6B0-B9B5.

Medical oncologist needed to work for another physician to diagnose and treat malignant lesions of patients with cancer. Examine internal structures and functions of organ systems, making correlation of x-ray findings with other exams and tests. Physician will establish protocol, design and diagnosis of treatment for patients. Treat malignant internal and external growths by exposure to radiation from x-rays, high energy sources, and natural and man-made radioisotopes directed at or implanted in affected areas of body. Salary $55,000 per year. Must have Texas medical license and five years training in internal medicine and oncology. Send curriculum vitae to Dr. Mahesh Kanojia, 3455 Stagg Drive, Beaumont, Texas 77701.

Texas openings—$75,000-$120,000 plus. Need FPs, Us, PDs, GSs, ORSs, OBGs in San Antonio, Fort Worth, Amarillo, Valley, West-East Texas. Call Ray Carter or Nancy McEntire at 512 33B-0041 or send CV to Kemper Resources, 9442 Capital of Texas Highway North, Suite 3S0, Austin, Texas 7B759.

OPPORTUNITIES SOUGHT

We have physicians who are looking to join solo, partnerships, or multispecialty groups in the Texas area. For more information call Medical Advisory Group, Inc., 214 75B-9939.

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1B01 North Lamar Blvd., Austin, Texas 7B701. 512 477-6704, ext. 263.

Board certified OBG wishes to relocate to larger community. Prefer to associate with another individual or group, but will consider solo. U.S. medical graduate. U.S. specialty trained. Bilingual English/Spanish. Good practice experience. Please reply to Ad-632, TEXAS MEDICINE, 1B01 North Lamar Blvd., Austin, Texas 78701.

Board certified internist seeks position in D/FW area. Selling successful practice in Utah in order to reunite family in Texas. Five years traditional private practice experience. Training, Universities of Iowa and Oregon. Please reply to Ad-644, TEXAS MEDICINE, 1B01 North Lamar Blvd., Austin, Texas 7B701.

General surgeon seeks suitable position. Willing to do some general practice. Will also consider HMO, minor surgery centers. Has current Texas license. Apply to Ad-649, TEXAS MEDICINE, 1B01 North Lamar Blvd., Austin, Texas 7B701.

Locum tenens—retired physician (GP) will cover your small hospital or clinic while your doctor is on vacation or CME. $25 per hour (24 hours minimum). Call Dr. Robert Franken at 915 944-3999 or write P.O. Box 6110S, San Angelo, Texas 76906 for CV and references.

prn, ltd.
locum tenens

the U.S.A.'s "temporary" solution specializing in family practice, radiology, and anesthesiology

1-800-531-1122
1000 N Walnut (Suite A)
New Braunfels, Texas 78130

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical laboratory, office, x-ray, ultra-sound equipment in excellent condition. We buy, sell, broker and repair. Ask about our Holter Scanning Services. Appraisals by Certified Surgical Consultants, Medical Equipment Resale, Inc., 24026 Haggerty Road, Farmington, Michigan 4B01B; 313 569-4407 anytime.

Complete set-ups to single items. Save over 50% on some items. Some examples: Ritter power tables, Medco Sololator, Burdick EK-B, Nova I, x-ray equipment, new Procto equipment. Ames Seralyzers, $500 up. All guaranteed! We buy, sell and broker. Call or write Medexchange, P.O. Box 1B164, Dallas, Texas 75218, 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $1275. Cardionostic Holter recorder (cassette) available from $995. Smallest slightest Holters update. Fast service (24-4B hrs.) turn over. Hookup kits starting at $4.9S. Special introductory offer of three free tests with any purchase or lease of the recorder. Cardiologist overread available for $15. If interested call 301 B70-3626.

Doctor, you can't beat the quality or the price! Holter Monitor Scanning Service. Physician owned, trained, and supervised. Now using UP Service for faster turnaround time. No contracts to sign. We can arrange for lease/purchase of Holter equipment. Now is the time to own your own recorder for as little as $49 a month. Call DCG Interpretation 313 B79-B860.

Berkeley Model 1000 colposcope with camera and flash unit. Three years old, one year in use. Also Hamilton exam table, sterilizer, hematocrit centrifuge and miscellaneous orthopedic supplies. D. Evans, MD, Taylor, Texas; 512 352-7347.

Office Space/Property

San Antonio—General internist desires to sublease ready-to-go office space with five exam rooms. Rapidly growing North Central location. Ideal for allergist, dermatologist, or other primary care physician. For information call S12 377-3224.

Austin: For lease, 1300 sq. ft. duplex near Seton. Ideal for solo. Waiting, two offices, lab, nurse's station and four exam rooms. Ben H. White, MD or Karen Haslund, MD, S12 454-B691.

North Dallas suburb—up to 3400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 B67-6500.

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12B11 Castle George, San Antonio, Texas 78230.

Austin: To sublet, 2,129 sq. ft. adjacent to Seton Hospital and other primary medical facilities. Ideal for two man office. Waiting, business and reception area, two offices, three exam rooms, x-ray room/lab. Corner suite on 7th floor, with lovely view. Ten-station, 4 lines phone system available also. For more information call Debbie: 512 458-32S7.

Denton, Texas—Brand new unique medical building offers 3,300 sq. ft. for lease or sale. Centrally located in a rapidly growing area 25 minutes away from Dallas/Fort Worth. Prefer obstetricians or ENTs. Will help with finishing out, plus three months free rent. Will share x-ray facility. Call B17 3B2-5466.

Austin—General internist desires to sublet half of 2,200 square foot office in Medical Arts Square. Convenient location one block from St. David's Hospital near university campus. Two exam rooms, one consultation room, chest x-ray facilities, large waiting area, free parking. Terms negotiable. 512 476-914S.

For Sale—Two urgent care centers, operating and established within San Antonio. Fully equipped with complete x-ray laboratory. Excellent opportunity for young FP or GP. 512 680-4040 between B am and 4 pm.

Practices

Gynecology: Houston. Extremely large, gynecology-only practice for sale in Northwest Houston. Practice enjoys an exceptional net income. Doctor retiring. Option to purchase building. 4½ days per week practice. For further details phone 713 771-5011. TMH428.

Family Practice—General Surgery—Central Texas. Dynamic practice with 100+ patients per week and five to 10 new patients per day. Good location with low overhead. Two hospitals, major university, cultural and recreational opportunities. Call evenings: 409 693-4529.

Medical practice sales and appraisals—We specialize in the valuation and selling of medical practices. If interested in buying or selling a medical practice contact our Brokerage Division at The Health Care Group, 400 GS8 Building, Bala Cynwyd, PA 19004; 215 667-8630.

Thriving family practice for sale in South Texas. Established 10 years. Gross $250,000 plus. Excellent community opportunity and terms close to big metropolis with year around recreational facilities. Owner planning to leave for Fellowship training. Please reply to Ad-64B, TEXAS MEDICINE, 1B01 North Lamar Blvd., Austin, Texas 7B701.

General surgery practice, office and equipment for sale or lease with option to buy. 30 miles from San Antonio, drawing population S0-60,000. Receipts over $200,000 year. Leaving for Fellowship. Available now to July. Call 512 379-0326.

Retiring family physician wishes to sell well established practice. Most suitable for Spanish-speaking doctor. Contact Reuben Mutnick, MD, 112 S. Concepcion Avenue, El Paso, Texas 79905; 915 772-5866 am, 91S 5B1-0B7S pm.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-B00-241-690S. Serving MDs for over ten years.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 7B705; phone 512 472-92S1. (Formerly Home of the Holy Infancy)

Wanted to buy—General practice or general practice with surgery or minor emergency center. Could take over the practice immediately. Have current Texas license. Apply to Ad-650, TEXAS MEDICINE, 1B01 North Lamar Blvd., Austin, Texas 78701.

FORECAST·87

READING MEDICINE'S FUTURE

Order Cassette Tapes Today!

Texas Medical Association 1987 Winter Conference

Tape 1
Representing the Physicians of Texas—Jim Bob Brame, MD
Medical Issues of the Day: Positive Approaches in Facing the Challenge—William S. Hotchkiss, MD
Old Attitudes, New Realities—James H. Sammons, MD

Tape 2
Dimensions of Increasing Competition: Lessons for the Future—Robert D. Burnett, MD
Physicians' Fees and Reimbursement: Current Explorations and Future Trends—Ronald E. Henderson, MD

Tape 3
Panel: Tort, Court, and Insurance Reform—The 1987 Legislature's View of the Liability Crisis
Representative Mike Toomey
Judge Robert W. Calvert
Senator Chet Edwards
David Vanderpool, MD

Tape 4
Breakout Session 1—Physician Fees and Reimbursement Changes by Medicare
Harold Whittington
Ronald E. Henderson, MD
Grover L. Bynum, Jr., MD

Tape 5
Breakout Session 2—Maintaining Professional Standards—A Look at Peer Review and Medical Discipline in Texas
Bill Campbell, JD
Robert M. Tenery, Jr., MD
Charles W. Bailey, MD, JD
Helene A. Alt, JD
Marshall K. Dougherty, MD

Tape 6
Breakout Session 3—A Medical Legislative Prognosis for the 1987 Session
Bernard W. Palmer, MD
Larry J. Hines, MD
Peter V. Weston, MD
Alan C. Baum, MD
William G. Gamel, MD

Special Pre-Conference Marketing Workshop/Friday, February 6
Two-tape special "Marketing Tips for a Successful Practice"
Jeffrey J. Denning, Conomikes Associates, Inc.—$14.95, plus 7¼% state sales tax.

Forecast 87, Reading Medicine's Future 1987 Winter Conference Tape Order Form

Individual audio cassette tapes are $7.95 each, plus 7¼% state sales tax.

☐ Tape 1 ☐ Tape 2 ☐ Tape 3 ☐ Tape 4 ☐ Tape 5 ☐ Tape 6

_____ Marketing Workshop Tapes ($14.95, plus 7¼%)

Cost _____
Sales tax _____
Total _____

☐ Paid ☐ Bill ☐ Mail ☐ Delivered

Name _____

Address _____

City _____

Zip _____

For additional information, contact TMA Communication Department, 1801 North Lamar Blvd., Austin, Texas 78701; 512/477-6704.

FORECAST·87
READING MEDICINE'S FUTURE

Advertising Directory

Air Force	77
Air Force Reserve	35
American Physicians Life Insurance	49
Ayerst Laboratories	41–44, 84–86
BMW Center	76
Burroughs Wellcome	65–67
Campbell Laboratories, Inc.	10
Diagnostic Clinic of Houston	31
I.C. System, Inc.	71
Knoll Pharmaceutical	45, 46
Eli Lilly & Company	88
Marion Laboratories	63, 64
The Medical Protective Company	4
Norwich-Eaton Pharmaceuticals	61, 62
Ben H. Quinney, Jr., MD	35
Roche Laboratories	1, 2, 50
Scott and White Clinic	Back Cover
Smith, Kline & French Laboratories	83
Spring Shadows Glen	2nd Cover
Starlite Village Hospital	35
Texas Medical Association	
120th Annual Session	55–60
1987 Calendar of Workshops	69, 70
Physician Health and Rehabilitaton Assistance Fund	99
Memorial Library	80
Texas Medical Association Insurance Program	14
Texas Medical Liability Trust	3rd Cover
Timberlawn Psychiatric Hospital	Back Cover
Trans-Texas Leasing	81
The University of Texas Health Center at Tyler	2nd Cover
The Upjohn Company	87
Vestra-Subco, Inc.	10
Western Medical Corp.	11

Texas Physicians' Directory	89–95
Classified Advertising	96–98

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

HELP YOUR COLLEAGUES HELP THEMSELVES

It's a fact. A shortage of funds can prevent an impaired physician from getting the help he or she needs and wants.

The Physician Health and Rehabilitation Assistance Fund was established by the Texas Medical Association Committee on Physician Health and Rehabilitation primarily to provide assistance to impaired physicians who cannot afford treatment for substance abuse or other problems.

Financial assistance is provided in the form of a loan, with funds usually sent directly to providers of care.

Please help TMA help your colleagues. Support the TMA Physician Health and Rehabilitaton Assistance Fund. Your contribution is tax deductible.

If you would like to know more about how the fund assists indigent, impaired physicians, call TMA at 512/477-6704, ext. 141.

TMA PHYSICIAN HEALTH AND REHABILITATION ASSISTANCE FUND

I want to support the Physician Health and Rehabilitation Assistance Fund. Enclosed is my tax deductible contribution in the amount of:

_____ $25 _____ $100

_____ $50 _____ $ _____

Name _____

Address _____

_____

_____

Please return this form to: Texas Medical Association, Physician Health and Rehabilitation Assistance Fund, 1801 North Lamar Blvd., Austin, Texas 78701.

COURSES

MARCH

Allergy

March 4-8, 1987
1987 PAN AMERICAN ALLERGY SOCIETY ANNUAL TRAINING COURSE AND SEMINAR. Four Seasons Hotel, San Antonio, Tex. Fee $415 members course and seminar, $485 nonmembers course and seminar. Credit TBA; 31 hours. Contact Betty Kahler, Pan American Allergy Society, 229 Parking Way, Lake Jackson, TX 77566 (409) 297-8964

March 13-15, 1987
SOUTHWEST ALLERGY FORUM. Westin Paso del Norte Hotel, El Paso, Tex. Fee $150. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Edward Egbert, MD, 1700 Curie Dr, El Paso, TX 79902 (915) 533-3621

Anesthesiology

March 20-22, 1987
RISKY SITUATIONS IN ANESTHESIA: MANAGEMENT AND MONITORING. Westin Hotel at the Galleria, Dallas. Fee $375 physicians, $275 nurse anesthetists. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Barbara Grayson, 3500 Gaston Ave, Dallas, TX 75235 (214) 820-2317

Cardiovascular Disease

March 26-28, 1987
CARDIOLOGY: CLINICAL EVALUATION AND DECISION MAKING. Westin Hotel at the Galleria, Houston. Fee $275 physicians, $150 residents, students, allied health professionals. Credit TBA; 17 hours. Contact Texas Heart Institute, Office of Medical Director, PO Box 20269, Houston, TX 77225 (713) 791-2157

Emergency Care

March 28, 1987
EMS: THE NEW AND UNUSUAL USUAL. College Station Hilton, College Station, Tex. Fee $35 early registration, $40 late registration. Credit TBA. Contact Sonya McBryde, Texas A&M Emergency Care Team, A. P. Beutel Health Center, College Station, TX 77843-1264 (409) 845-4321

Family Medicine

March 5-6, 1987
ISSUES IN MATERNAL AND INFANT NUTRITION II. Westin Galleria Hotel, Houston. Fee $50. Credit TBA. Contact Jacqueline Robbins, March of Dimes, Metropolitan Houston Chapter, 6910 Fannin, Suite 223-C, Houston, TX 77030 (713) 796-1463

March 19-22, 1987
12TH ANNUAL FAMILY PRACTICE REVIEW. Marriott on the Riverwalk, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Obstetrics and Gynecology

March 1-7, 1987
UPDATE 87: OFFICE OBSTETRICS AND GYNECOLOGY. Shadow Ridge Resort and Conference Center, Park City, Utah. Fee TBA. Credit TBA. Contact Charlene Lee, Communications Specialist, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4073

March 5-8, 1987
TACO III: 3RD TEXAS ANESTHESIA CONFERENCE FOR OBSTETRICS. Intercontinental Hotel, Houston. Fee $260 physicians, $160 CRNAs. Credit TBA, 14 hours. Contact Pat Joynton, 6431 Fannin, MSB G.004, Houston, TX 77030 (713) 792-5346

March 27-28, 1987
CURRENT CONCEPTS IN OBSTETRICS AND GYNECOLOGY. Inn on the Park, Houston. Fee $250 physicians, $125 clinical faculty, non-Baylor fellows and residents, PAs, nurses. Credit TBA; 16 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

March 28, 1987
CURRENT CLINICAL PRACTICE IN OBSTETRICS AND GYNECOLOGY. Registry Hotel, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 6.5 hours. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Ophthalmology

March 20-22, 1987
CLINICAL ADVANCES IN OPHTHALMOLOGY FOR THE PRACTICING OPHTHALMOLOGIST. Houstonian Hotel, Houston. Fee $250 physicians; $125 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Vicki Forgac or Carol Soroka, Office of Continuing Medical Education, Room 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-4941

Pathology

March 6, 1987
DRUG TESTING: MEDICAL, LEGAL, ANALYTICAL ASPECTS. Location TBA, Houston. Fee $95. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

March 9-13, 1987
CURRENT CONCEPTS IN TOXICOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; 35 hours. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

March 2-12, 1987
21ST COMPREHENSIVE REVIEW COURSE IN PHYSICAL MEDICINE AND REHABILITATION. Marriott Hotel Medical Center, Houston. Fee $445. Category 1, AMA Physician's Recognition Award; 77 hours. Contact Carol Soroka or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Urology

March 20-22, 1987
AMERICAN UROLOGICAL ASSOCIATION SOUTH CENTRAL SECTION SEMINAR. Houston. Fee $300. Category 1, AMA Physician's Recognition Award; 29 hours. Contact Elizabeth Smith, PO Box 25147, Houston, TX 77265 (713) 791-1470

APRIL

Arthritis and Rheumatism

April 24, 1987
THE ST PAUL TEACHING DAY IN RHEUMATIC DISEASES. Wyndham Hotel, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Family Medicine

April 6-11, 1987
FAMILY PRACTICE REVIEW 1987. San Luis Hotel, Galveston, Tex. Fee $500. Category 1, AMA Physician's Recognition Award; 45 hours. Contact Gayle Norris, Learning Center J-34, Office of Continuing Education, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

April 22-26, 1987
3RD ANNUAL FAMILY MEDICINE REVIEW WITH TESTING TECHNIQUES FOR BOARD EXAMS. Four Seasons Hotel, Austin, Tex. Fee $350 physicians, $225 residents. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Office of Continuing Medical Education, Scott and White, Temple, TX 76508 (817) 774-4073

April 27-May 1, 1987
11TH ANNUAL REVIEW COURSE IN FAMILY PRACTICE. Marriott Hotel at Astrodome, Houston. Fee $490 physicians, $325 PAs. Category 1, AMA Physician's Recognition Award; 50 hours; AAFP prescribed. Contact Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

April 11, 1987
DIABETES UPDATE. Wyndham Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

April 11, 1987
2ND ANNUAL WOMEN IN MEDICINE SYMPOSIUM. The University of Texas Southwestern Medical School, Dallas. Fee TBA. Credit TBA. Contact Jackie de Salme, B11.100, Office of Associate Dean of Student Affairs, UT Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235-9006

April 21-22, 1987
AIDS AND PUBLIC POLICY: A COMMUNITY RESPONSE. Downtown Chicago Marriott, Chicago. Fee TBA. Credit TBA. Contact Robert Rinaldi, PhD, AMA Project Coordinator on AIDS, 535 N Dearborn St, Chicago, IL 60610 (312) 645-5076

April 23-25, 1987
OCCUPATIONAL LUNG DISEASE. Houston Marriott Medical Center, Houston. Fee $285. Category 1, AMA Physician's Recognition Award; 17 hours. Contact Vicki Forgac or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Otolaryngology

April 4-5, 1987
ENDOSCOPIC SINUS SURGERY. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $500 lecture series and lab course, $250 lecture series and videos only. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Ann Parchem, Division of Continuing Education, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Pediatrics

April 3-4, 1987
PEDIATRIC POSTGRADUATE SYMPOSIUM. Houston Marriott Hotel-Medical Center, Houston. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

April 10-12, 1987
24TH ANNUAL PEDIATRICS FOR THE PRACTITIONER. Hyatt Regency, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

April 22-25, 1987
SYMPOSIUM ON OPTIONS IN MANAGING CHILDREN WITH INFECTIONS/7TH ANNUAL NATIONAL PEDIATRIC INFECTIOUS DISEASE SEMINAR. Hilton Hotel, Las Vegas. Fee $300 physicians, $225 residents, fellows, PAs, and pediatric nurse practitioners. Category 1, AMA Physician's Recognition Award; 22 hours. AAFP prescribed. Contact Marian Troup, Department of Pediatrics, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3439

Sports Medicine

April 9-11, 1987
2ND ANNUAL SYMPOSIUM ON REHABILITATIVE SPORTS MEDICINE. Inn on the Park, Houston. Fee $275 physicians, $200 therapists and allied professionals, $150 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

April 6-8, 1987
GARY P. WRATTEN SURGICAL SYMPOSIUM. Location TBA, El Paso, Tex. Fee $150. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Col Silverio Cabellon, Jr, Chief, General Surgery Service, William Beaumont Army Medical Center, El Paso, TX 79920-5001 (915) 569-2698 or (915) 569-2621

MAY

Family Medicine

May 30, 1987
FAMILY PRACTICE: CLINICAL ENCOUNTERS 1987. The University of Texas Health Science Center, Room D1.600, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Linda Spino, PhD, Department of Family Practice and Community Medicine, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2134 or (214) 688-2166

General Medicine

May 9, 1987
MANAGEMENT OF MYOCARDIAL INFARCTION IN THE COMMUNITY HOSPITAL. Registry Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

May 20, 1987
12TH ANNUAL INFECTIOUS DISEASES SEMINAR. Wyndham Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235

Internal Medicine

May 26-29, 1987
10TH ANNUAL INTENSIVE REVIEW OF INTERNAL MEDICINE. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $325. Category 1, AMA Physician's Recognition Award; 28 hours. Contact Ann Parchem, Division of Continuing Education, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Pathology

May 14-16, 1987
CURRENT ISSUES IN SURGICAL PATHOLOGY, VI. Room D1.600, The University of Texas Health Science Center, Dallas. Fee $600 complete course with glass slides, $450 complete course without glass slides, $350 basic course, $125 per day/partial course, $125 students. Category 1, AMA Physician's Recognition Award; 22 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Physical Medicine and Rehabilitation

May 7-9, 1987
5TH ANNUAL CHRONIC PAIN COURSE: EVALUATION AND MANAGEMENT. Baylor College of Medicine, Houston. Fee TBA. Credit TBA. Contact Vicki Forgac or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

JUNE

Orthopedic Surgery

June 5-7, 1987
SOUTHWESTERN ORTHOPEDIC SURGERY REVIEW. Dallas. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Otolaryngology

June 18-20, 1987
18TH ANNUAL OTOLARYNGOLOGY CONFERENCE. Galveston, Tex. Contact Martha Berlin, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Pediatrics

June 8-12, 1987
ACUTE CARE PEDIATRICS: REVIEW AND UPDATE OF THE STATE OF THE ART. Hilton Head Island, SC. Contact Lila Lerner or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-4941

June 11-13, 1987
1987 ANNUAL PEDIATRIC REVIEW AND UPDATE. Galveston, Tex. Contact Gayle Norris, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Saturdays, 9 am-12 pm (Oct 25, 1986-May 2, 1987)
FUNDAMENTALS OF PRACTICAL THERAPEUTICS. Cullen Auditorium, Baylor College of Medicine, Houston. Fee $295 physicians, $100 residents and fellows. Category 1, AMA Physician's Recognition Award; 72 hours. AAFP prescribed. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN CLINICAL NMR. Biomedical NMR Center, Baylor College of Medicine, Houston. Fee $1,000; $500 lecture series only. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Biomedical NMR Center, The Woodlands, Tex. Fee $800 physicians, $400 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

FEBRUARY

MARKETING TECHNIQUES FOR A SUCCESSFUL PRACTICE—6 hours
Feb 17, 1987, Embassy Suites, Austin
Feb 18, 1987, Holiday Inn Civic Center, Lubbock
Feb 19, 1987, Dallas Marriott Park Central, Dallas

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Feb 21, 1987, The Summit Hotel, Dallas

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
Feb 24, 1987, Bexar County Medical Society Headquarters, San Antonio
Feb 25, 1987, Corpus Christi Marriott, Corpus Christi
Feb 27, 1987, Sheraton Harlingen Inn, Harlingen

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
Feb 24, 1987, Bexar County Medical Society Headquarters, San Antonio
Feb 25, 1987, Corpus Christi Marriott, Corpus Christi
Feb 27, 1987, Sheraton Harlingen Inn, Harlingen

CALENDAR OF MEETINGS ■Denotes Texas Meetings

FEBRUARY

■5TH ANNUAL INTERNATIONAL SYMPOSIUM ON MAN AND HIS ENVIRONMENT IN HEALTH AND DISEASE, Dallas, Feb 26-March 1, 1987. Kim Rice, Human Ecology Research Foundation of the Southwest, Inc, 8345 Walnut Hill Lane, Suite 205, Dallas, TX 75231-4262 (214) 361-9515

12TH INTERNATIONAL JOINT CONFERENCE ON STROKE AND CEREBRAL CIRCULATION, Tampa, Fla, Feb 26-28, 1987. Leonard Cook, American Heart Association, 7320 Greenville Ave, Dallas, TX 75231 (214) 750-5437

AMERICAN ACADEMY OF ALLERGY AND IMMUNOLOGY 43RD ANNUAL MEETING, Washington, DC, Feb 19-25, 1987. Donald McNeil or Richard Iber, 611 E Wells St, Milwaukee, WI 53202 (414) 272-6071

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION ANNUAL MEETING, New Orleans, Feb 3-7, 1987. Todd Zegel, 25 E 21st St, 6th Floor, New York, NY 10010 (212) 477-2677

AMERICAN PHYSICAL THERAPY ASSOCIATION COMBINED SECTIONS MEETING, Atlanta, Feb 12-15, 1987. Bonnie Polvinale, 1111 N Fairfax St, Alexandria, VA 22314 (703) 684-2782

AMERICAN SOCIETY FOR PARENTERAL AND ENTERAL NUTRITION 11TH CLINICAL CONGRESS, New Orleans, Feb 1-4, 1987. Kelly Tilton, ASPEN, 8605 Cameron St, Suite 500, Silver Spring, MD 20910 (301) 587-6315

■TEXAS ASSOCIATION FOR CHILDREN AND ADULTS WITH LEARNING DISABILITIES 24TH ANNUAL INTERNATIONAL CONFERENCE, San Antonio, Feb 25-28, 1987. TACLD, 1011 West 31st St, Austin, TX 78705 (512) 458-8234

■TEXAS ASSOCIATION OF OBSTETRICS AND GYNECOLOGY ANNUAL MEETING, Fort Worth, Feb 25-28, 1987. Robert Wernecke, MD, #403 Medical Park Tower, 1301 W 38th St, Austin, TX 78705 (512) 454-5221

■**TEXAS MEDICAL ASSOCIATION WINTER CONFERENCE**, Austin, Feb 6-8, 1987. Robert G. Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

UNIVERSITY ASSOCIATION FOR EMERGENCY MEDICINE ANNUAL RESEARCH SYMPOSIUM, Clearwater Beach, Fla, Feb 21-24, 1987. Mary Ann Schropp, 900 W Ottawa, Lansing, MI 48915 (517) 485-5484

MARCH

2ND INTERNATIONAL INTERDISCIPLINARY CONFERENCE ON HYPERTENSION IN BLACKS, Atlanta, March 5-7, 1987. Emory University School of Medicine, Continuing Medical Education, 110 WHSCAB, 1400 Clifton Rd, Atlanta, GA 30322 (404) 727-5695

8TH NATIONAL LESBIAN AND GAY HEALTH CONFERENCE/5TH NATIONAL AIDS FORUM, Los Angeles, March 26-29, 1987. National Lesbian and Gay Health Foundation, Inc, PO Box 65472, Washington, DC 20035 (202) 797-3708

AMERICAN ASSOCIATION OF IMMUNOLOGISTS ANNUAL MEETING, Washington, DC, March 29-April 3, 1987. Dr Joseph Saunders, 9650 Rockville Pike, Bethesda, MD 20814 (301) 530-7178

AMERICAN ASSOCIATION OF PATHOLOGISTS, INC, ANNUAL MEETING, Washington, DC, March 29-April 3, 1987. Dana Raitt, 9650 Rockville Pike, Bethesda, MD 20814 (301) 530-7130

AMERICAN COLLEGE OF CARDIOLOGY 36TH ANNUAL SCIENTIFIC SESSION, New Orleans, March 8-12, 1987. ACC, 9111 Old Georgetown Rd, Bethesda, MD 20814 (1-800) 253-INFO

AMERICAN COLLEGE OF MEDICINE 6TH ANNUAL MEETING, Las Vegas, March 15-20, 1987. John Bellows, MD, PhD, 211 East Chicago Ave, Suite 1044, Chicago, IL 60611 (312) 787-3335

■AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER ANNUAL MEETING, Dallas, March 6-7, 1987. Michael McArthur, MD, 214 E. Houston, Tyler, TX 75072 (214) 597-3796

AMERICAN HEART ASSOCIATION 27TH ANNUAL CONFERENCE ON CARDIOVASCULAR DISEASE EPIDEMIOLOGY, Charleston, SC, March 19-21, 1987. Leonard Cook, AHA, 7320 Greenville Ave, Dallas, TX 75231 (214) 750-5437

AMERICAN MEDICAL STUDENT ASSOCIATION ANNUAL MEETING, New Orleans, March 18-22, 1987. Jeffrey Stolz, 1910 Association Dr, Reston, VA 22091 (703) 620-6600

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS ANNUAL MEETING, Orlando, Fla, March 25-28, 1987. Elaine Galasso, 1718 Gallagher Rd, Norristown, PA 19401 (215) 825-3838

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY 22ND ANNUAL MEETING, Las Vegas, March 15-20, 1987. John G. Bellows, MD, PhD, 211 East Chicago Ave, Suite 1044, Chicago, IL 60611 (312) 787-3335

INTERNATIONAL ACADEMY OF PATHOLOGY, UNITED STATES AND CANADA DIVISION ANNUAL MEETING, Chicago, March 8-13, 1987. Nathan Kaufman, MD, 3515 Wheeler Rd, Building C, Suite B, Augusta, GA 30909 (404) 733-7550

LEUKEMIA SOCIETY OF AMERICA 3RD NATIONAL MEDICAL SYMPOSIUM, San Diego, Calif, March 18-21, 1987. M. Louise Toglia, Medical Programs Department, 733 Third Ave, New York, NY 10017 (212) 573-8484

■SINGLETON SURGICAL SOCIETY 34TH ANNUAL MEETING, Galveston, March 5-7, 1987. Susan Royal, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

SOCIETY OF NUCLEAR MEDICINE, SOUTHWESTERN CHAPTER ANNUAL MEETING, Little Rock, Ark, March 26-29, 1987. Justine Jean Parker, PO Box 40279, San Francisco, CA 94140 (415) 647-1668

■TITUS HARRIS SOCIETY 27TH ANNUAL MEETING, Austin, March 5-8, 1987. Susan Royal, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

APRIL

■11TH ANNUAL COOLEY RADIOLOGICAL SOCIETY MEETING, Galveston, April 24-26, 1987. Martha Berlin, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

AMERICAN ACADEMY OF NEUROLOGY ANNUAL MEETING, New York, April 5-11, 1987. Jan Kolehmainen, 2221 University Ave, SE, Minneapolis, MN 55414 (612) 623-8115

AMERICAN ASSOCIATION FOR THORACIC SURGERY ANNUAL MEETING, Chicago, April 6-8, 1987. William Maloney, Executive Director, AATS, 13 Elm St, Manchester, MA 01944 (617) 927-8330

AMERICAN BURN ASSOCIATION ANNUAL MEETING, Washington, DC, April 29-May 2, 1987. Thomas Wachtel, MD, 1130 E McDowell Rd, Suite B-2, Phoenix, AZ 85006 (602) 239-2391

AMERICAN COLLEGE OF OB/GYN ANNUAL CLINICAL MEETING, Las Vegas, April 27-30, 1987. W. H. McDannel, 600 Maryland Ave, SW, #300, Washington, DC, 20024 (207) 638-5577

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION ANNUAL MEETING, Philadelphia, April 26-May 1, 1987. Nancy Olson, 2340 S Arlington Heights Rd, #400, Arlington Heights, IL 60005 (312) 228-6850

AMERICAN PEDIATRIC SOCIETY ANNUAL MEETING, Anaheim, Calif, April 27-May 1, 1987. Audrey Brown, MD, 450 Clarkson Ave, Brooklyn, NY 11203 (718) 270-1692

AMERICAN ROENTGEN RAY SOCIETY ANNUAL MEETING, Miami, April 26-May 1, 1987. George Kling, MD, Harper-Grace Hospital, Dept of Radiology, 3990 John R, Detroit, MI 48201 (313) 494-8405

AMERICAN SOCIETY FOR HEAD AND NECK SURGERY ANNUAL MEETING, Denver, April 25-May 2, 1987. W. E. Fee, Jr, MD, ASHNS, Division of Otolaryngology, Head and Neck Surgery, Stanford University Medical Center, Stanford, CA 94305 (415) 497-5828

AMERICAN SOCIETY OF COLON AND RECTAL SURGEONS ANNUAL CONVENTION, Washington, DC, April 5-10, 1987. Harriette Gibson, Executive Director, 615 Griswold, #1717, Detroit, MI 48226 (313) 961-7880

INTERNATIONAL COLLEGE OF SURGEONS, UNITED STATED SECTION ANNUAL MEETING, Washington, DC, April 3-5, 1987. Rob Dewey, Coordinator, Membership and Continuing Medical Education, 1516 N Lake Shore Dr, Chicago, IL 60610-1694 (312) 787-6274

■MEDICAL-SURGICAL CONFERENCE OF THE RIO GRANDE VALLEY, McAllen, April 9-11, 1987. Conference Committee, Medical-Surgical Conference of the Rio Grande Valley, 817 Quince Ave, McAllen, TX 78501

NATIONAL CONFERENCE ON HIGH BLOOD PRESSURE CONTROL, INC, Las Vegas, April 24-26, 1987. Yvonne Rodler, 2121 Wisconsin Ave, NW, Suite 410, Washington, DC, 20007 (202) 944-3176

SOUTHERN CALIFORNIA NEUROPSYCHIATRIC INSTITUTE 7TH INTERNATIONAL CONFERENCE/ADOLESCENTS IN CRISIS, Barbados, West Indies, April 15-20, 1987. Teresa Santana, SCNPI, 6794 La Jolla Blvd, La Jolla, CA 92037 1-800-423-9521

■TEXAS COUNCIL ON FAMILY RELATIONS ANNUAL MEETING, San Antonio, April 2-3, 1987. Dr Connie Steele, Dept of Human Development and Family Studies, College of Home Economics, Texas Tech University, Lubbock, TX 79409 (806) 742-3000

MAY

AMERICAN PSYCHIATRIC ASSOCIATION ANNUAL MEETING, Chicago, May 9-15, 1987. Kathleen Bryan, Director, Meetings Management, 1400 K St, NW, Suite 503, Washington, DC 20005 (202) 682-6100

NATIONAL RURAL HEALTH CARE ASSOCIATION NATIONAL CONFERENCE, Nashville, Tenn, May 6-9, 1987. NRHCA, 301 E Armour Blvd, Suite 420, Kansas City, MO 64111

1 800 252-7003 (In Austin, call 479-7894)

Get current information on health and medical legislation before the Texas Legislature. The brief recorded message is updated each weekday at 10 am.

A service of the Texas Medical Association Communication Department, in cooperation with the Division of Public Affairs.

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS
MEDICAL
LIABILITY
TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

S&W SCOTT&WHITE

Texas A&M University
College of Medicine

UPDATE '87:
OFFICE GYNECOLOGY AND OBSTETRICS

Shadow Ridge Resort and Conference Center

PARK CITY, UTAH

March 1-7, 1987

Third Annual
FAMILY MEDICINE REVIEW

Selected Topics
With Testing Techniques
for Board Exams

Four Seasons Hotel
AUSTIN, TEXAS

April 22-26, 1987

For more information or to register contact: Office of Continuing Medical Education, Scott and White, Temple, Texas 76508, (817) 774-4073.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223 214/381-7181

MARCH 1987

Texas Medicine

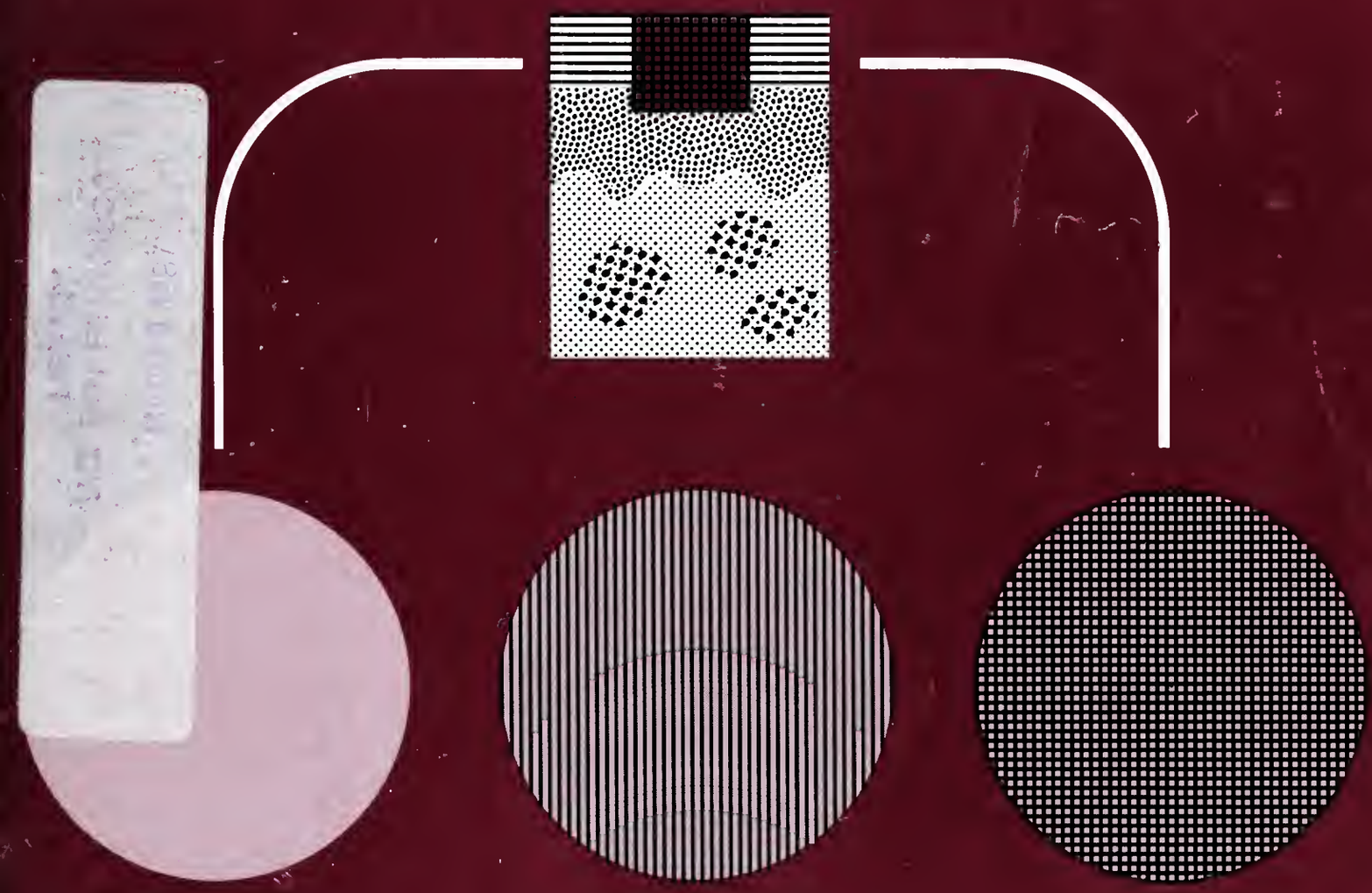
41 Malpractice carrier insolvency: Should you worry?

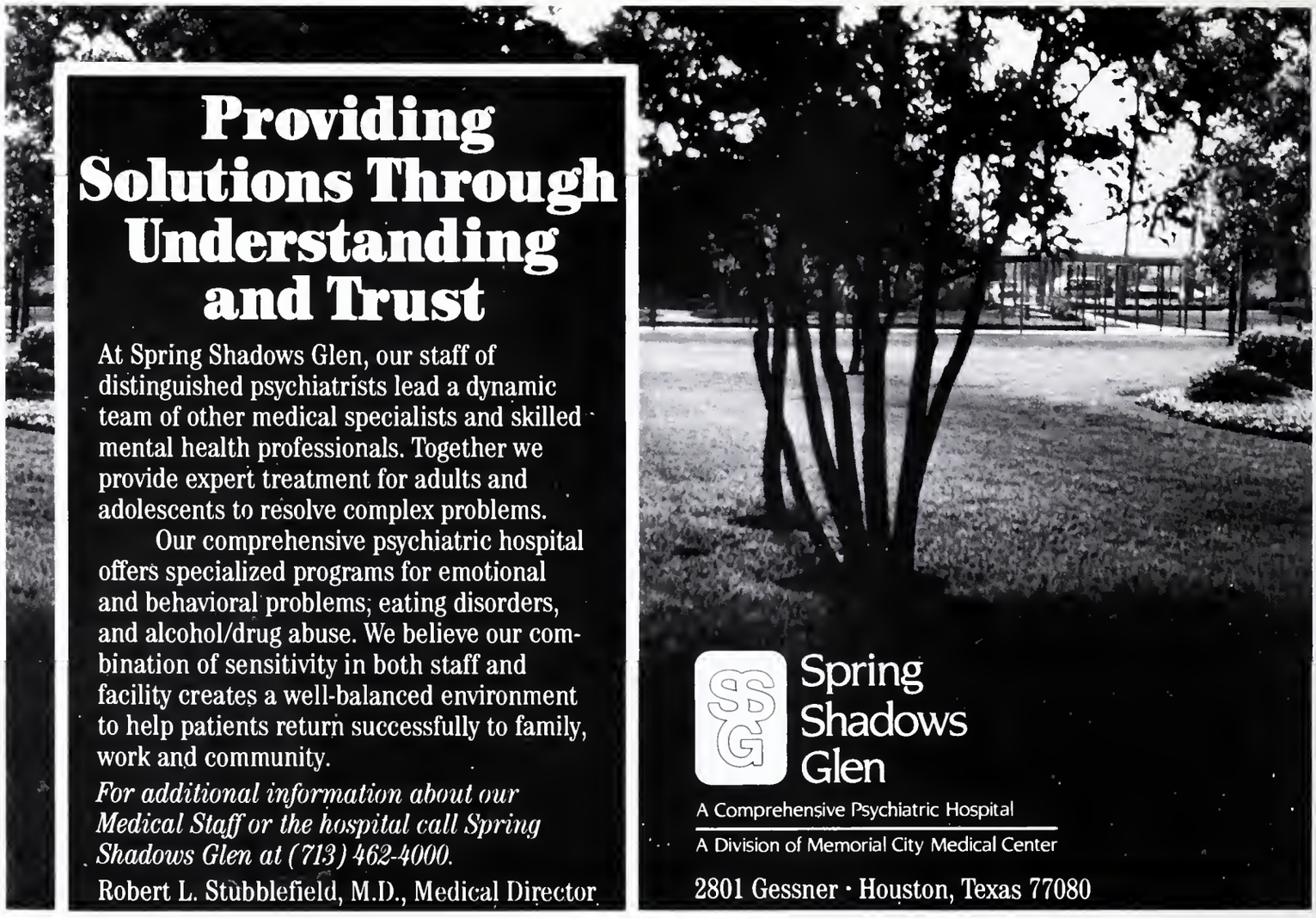
64 Texas indigent health care initiative

6, 91 Peer review in Texas

5, 49 Pregnancy among teenagers: Policies and funds

70 Cancer update: Cutaneous melanoma





Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080

PHYSICIANS

We are announcing opportunities for you to serve your country as an Air Force Reserve physician/officer. You can make new professional associations, obtain CME credit and help support the Air Force mission. For those who qualify, retirement credit can be obtained as well as low cost life insurance. One weekend a month plus two weeks a year or less can bring you pride and satisfaction in serving your country.

Call: (512) 385-1816
Or Fill Out Coupon and Mail Today!

To: Health Professions Recruiting
2610 RRS/RSH
Bergstrom AFB, TX 78743-6002

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Prior Service? Yes ____ No ____

Medical Specialty _____ Date of Birth _____

AIR FORCE RESERVE 10-710-1084

A GREAT WAY TO SERVE

YOUR ROCHE REPRESENTATIVE WOULD LIKE YOU TO HAVE SOMETHING THAT WILL ...

ROCHE®

... improve patient satisfaction with office visits

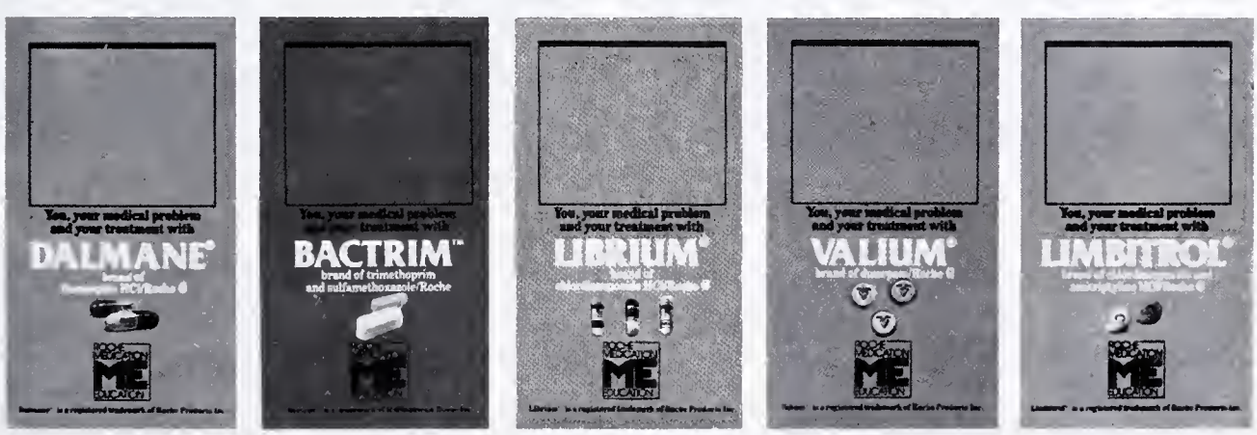
... improve patient compliance with your instructions

... reduce follow-up calls to clarify instructions

The new Roche product books

- **Offer a supplement to, not a substitute for, patient contact**
- **Support your specific instructions to the patient**
- **Provide a long-term reinforcement of your oral counseling**

Because you are the primary source of medical information for your patients, we invite you to look over the Roche Product Booklets shown below and ask your Roche representative for a complimentary supply of those applicable to your practice.



ROCHE MEDICATION ME EDUCATION

Medicines that matter from people who care

COMMITTED TO EXCELLENCE

ROCHE

PRESIDENT'S ACHIEVEMENT AWARD

Presenting the winners of the 1987 Roche President's Achievement Awards

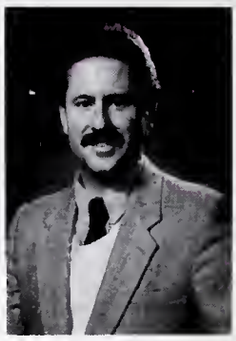
Hoffmann-La Roche is pleased to honor these outstanding sales representatives, chosen for their unparalleled dedication to the health-care field, professionalism and consistent high level of performance. Please join us in congratulating these exceptional individuals.

Susan D. Arnett

Michael D. Chandler

Verle F. Englerth

Mark J. Gude



Barry E. Holzbach

Kermit J. Hoover

Glenn J. Horstdaniel

Smith L. Miller

Michael H. Paggi

Donald R. Pettke, Jr.

Deborah L. Roberson

Ardie L. Segars, Jr.

Charles W. Shelley

Ronald L. Vaughn

John W. West

George A. Young

Turn to the following page and find out how your award-winning Roche representative can help both you *and* your patients.

TexasMedicine

VOLUME 83 MARCH 1987

Contents

ARTICLES

41 What to do if you believe your malpractice carrier is insolvent
Patrick H. Cantilo, JD

45 Suction lipectomy: a useful new tool for the plastic surgeon
Robert A. Ersek, MD; Jack Zambrano, MD; Gary Surak, MD; David Denton, PhD

49 Teenager pregnancy policies and the 70th legislative session
Peggy B. Smith, PhD; The Honorable Lena Guerrero; Elisa May, MSW

53 Nonparadoxical systemic artery embolus
Alexander P. Remenchik, MD; David P. Sufian, DO, Rasika R. Dehkne, MD

55 Sciatica produced by a sacral perineurial cyst
Dudley H. Davis, MD; J. Terry Wilkinson, MD; A. Kent Teaford, MD; Mitchell R. Smigiel, MD

64 The Texas indigent health care initiative: overview and issues
Charles E. Begley, PhD; Hardy D. Loe, Jr, MD, MPH

70 Cancer update: Cutaneous melanoma: a review of clinical management
Charles M. Balch, MD

EDITORIALS

5 Adolescent pregnancy—implications for Texas
Linda A. Jones, MD

6 Peer review: a call for legislative assistance
Bernard W. Palmer, MD

6 Aftermath of a malpractice suit
Art Buchwald

7 In pursuit of advocacy—the extra step
Harold C. Boehning, MD

8 You, too, can celebrate Be-Kind-to-Consultants Month
Rae Vajgert

FEATURES

88 TMA membership: a valuable asset

91 Peer review in Texas: a survey of medical staffs
Kim Ross

NEWS

TMA in action
13 Judge denies request for relief from Medicare fee provisions
13 Hospital leadership conference features distinguished speakers
13 Sunrise sessions feature variety of topics for early risers
15 AMA officials available to visit group practices

Health line
15 Health officials express concern about popular Mexican diet
15 Eye care project Helpline receives 6,371 Texas calls
15 Heart disease deaths decline during 1985

Socioeconomics
16 Number of physicians growing at slower pace, report says
16 Medical examiners rule on reimbursement for drugs

Capital comments
16 Senate committee reports on Alzheimer's disease

21 Newsmakers

DEPARTMENTS

10 Letters
83 Clinical abstracts
86 Information for authors
96 Medicine and the law: Anatomy of a Medicare lawsuit
103 Practice management: Reducing your collection costs
105 Deaths
108 Medicine in literature
121 Continuing education directory

ON THE COVER

Featured on the cover this month is an article from the Cancer Update series. "Cutaneous melanoma: a review of clinical management," written by Charles M. Balch, MD, begins on page 70. Cover design by Ed Triggs.

COMING NEXT MONTH

Scheduled for the April issue of *Texas Medicine* are articles on motorcycle deaths and injuries in Texas, thyroid sonography, and epidural anesthesia during labor and the incidence of forceps delivery. The Cancer Update series presents a colorectal health check as a strategy for prevention.

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

Harold R. High, MD, Cuero
Secretary

Merle W. Delmer, MD, San Antonio
James M. Graham, MD, Austin
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

Jim Bob Brame, MD, Eldorado
President

Nancy W. Dickey, MD, Richmond
Vice President

David Vanderpool, MD, Dallas
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Robert G. Mickey
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd, Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Shari Henson, Production Manager/ Editorial Assistant
Patty Illich, Administrative Secretary/ Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
L. Maximilian Buja, MD, Dallas
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701

Subscription rates, plus 7.25% state sales tax for Texas subscribers only, are: Members, $16 per year plus $1.16 sales tax; nonmembers and institutions, $20 per year plus $1.45 sales tax; foreign, $24 US currency; single copy, $2 plus $.15 sales tax.

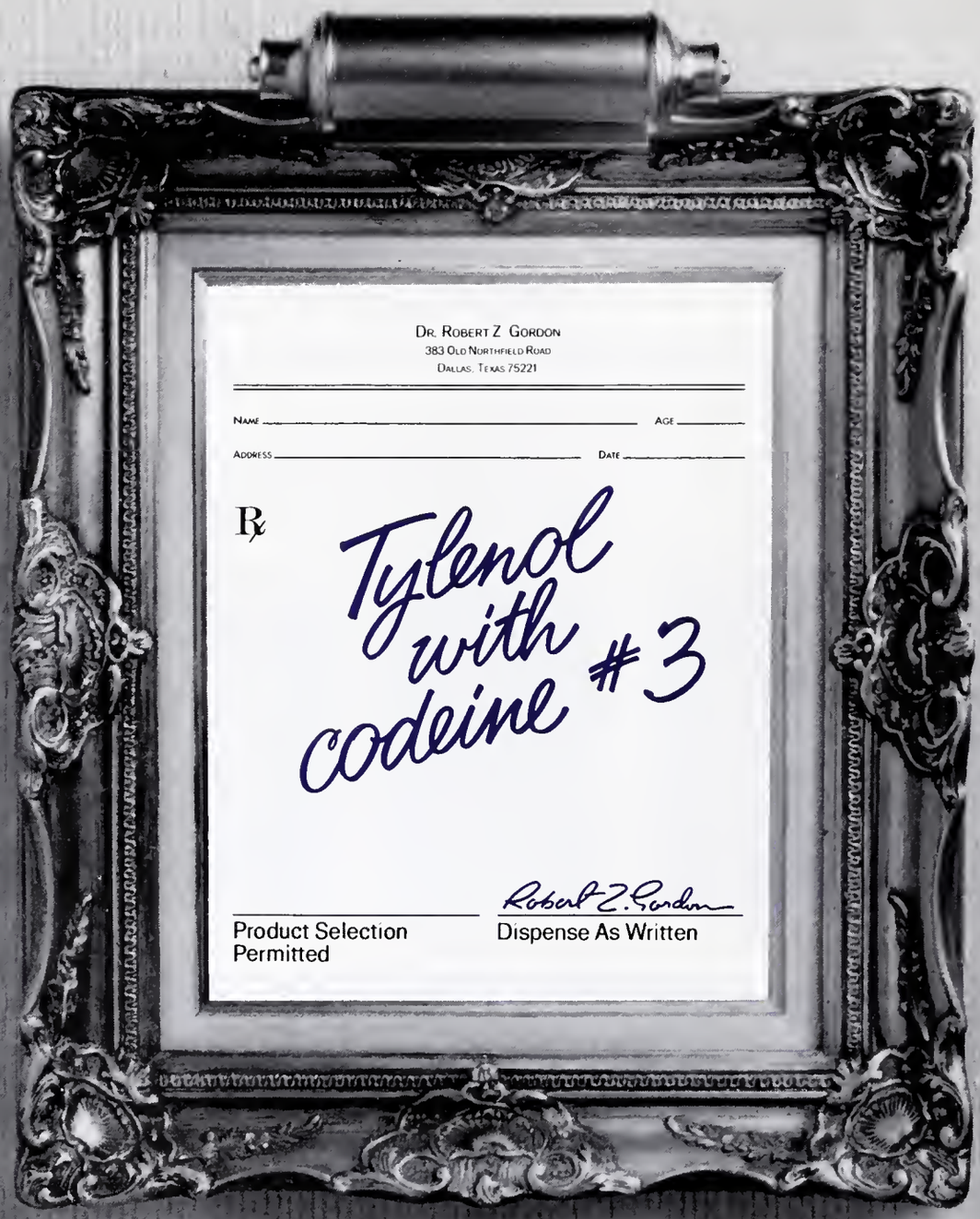
Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701.

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701.



CREATE A SIGNED ORIGINAL

to be sure your patients get...

Tylenol®

ACETAMINOPHEN with codeine phosphate

TABLETS Ⓒ III ELIXIR Ⓒ V

Tablets: Contain Codeine Phosphate*: No. 3—30 mg; No. 4—60 mg—plus Acetaminophen 300 mg.
Elixir: Each 5 mL contains 12 mg Codeine Phosphate* plus 120 mg Acetaminophen (Alcohol 7%).
*Warning: May be habit forming.

© McNEILAB, INC., 1987

TYCT 6445-A

Adolescent pregnancy—implications for Texas

Much has been written on the "epidemic" of teenage pregnancy in the United States. The numbers are impressive. In 1980 there were 921,696 pregnancies among 15-to 19-year-olds, an increase of 10.5% from 1974. The number of births actually decreased by 7.3%. In girls age 12 to 14 years, there were 23,010 pregnancies in 1980, a drop from 24,128 in 1974. However, the total number of girls in this age group decreased during those years, so these numbers actually reflect a 10.3% increase in the pregnancy rate—from 3.9/1,000 in 1974 to 4.3/1,000 in 1980 (1).

The pregnancy rate for *sexually experienced* girls aged 15–19 has decreased from 204.5/1,000 per year in 1974 to 192.8/1,000 in 1980. The fertility rate (live births) has also decreased (1). Taken together, these data imply that the percentage of sexually experienced girls has increased while the use of contraceptives has also increased. Nevertheless, four out of ten teenage girls in the United States will have at least one pregnancy during their teenage years (2, p 21). Almost 40% of these pregnancies will be terminated by abortion (2, p 17).

The United States has the highest teenage birth rate of any developed country except for Eastern Europe. Our rate is about three times that of the Soviet Union and higher than the developing countries of the Philippines, Malaysia, Singapore, and Tunisia (2, p 23).

What about Texas? According to 1981 data, Texas has the nation's third highest pregnancy rate in girls 15–19, 25% above the national average. We have the second highest number of pregnancies and the highest number of births to girls age 14 and younger (3). In fiscal year 1985, Texas spent over $15 million in Aid for Dependent Children (AFDC) payments to teenage mothers (4). An average of 8,800 mothers age 19 and younger received AFDC each month (5).

Ignoring the problem of adolescent pregnancy does not reduce the number of sexually active teenagers. The major reason teenagers do not use contraceptives is the common belief that "pregnancy can't happen to me." Teenagers are in the process of developing the capability for abstract thought, and many are unable to envision the possibility of sexual intercourse today resulting in a baby in nine months (6). From early childhood, our children are bombarded by sexual messages. Although sexual activity on television and in the movies is frequently shown and often explicit, rarely, if ever, do characters use contraception or deal with the responsibilities and consequences of pregnancy. Sexual intercourse is often portrayed as an early and inevitable step in any romantic relationship, and the possibility of saying "no" is not raised. Given this combination of concrete thinking and cultural conditioning, it is not surprising that teenagers are increasingly sexually active.

How can teenage pregnancies be reduced? Current sex education has not clearly decreased sexual activity or increased contraception use. (Neither has it increased sexual activity, a frequently cited fear.) It has been estimated that only about 10% of existing sex education or family life programs offer effective and high quality teaching (6). Improved, mandated sex education in junior *and* senior high school, including reproductive biology, sexual decision making, and information on contraception and sexually transmitted diseases, including AIDS, would at least make our adolescents better informed. We do not know whether such programs might also reduce the adolescent pregnancy rate.

Adolescents in many communities lack access to medical care, making it difficult to obtain contraception. Often teenagers would prefer not to go to their family physicians for contraceptive information, fearing lack of confidentiality (6). Lack of contraception does not imply lack of sexual activity—most teenagers coming to a clinic to obtain contraception have been sexually active for nine months or more (2, p 44).

Minnesota found one way of increasing access to medical care. In 1973, the St Paul MIC High School Clinic Project began a comprehensive medical clinic at an inner city junior/senior high school. The clinic now offers comprehensive medical care, including family planning, routine physicals, job physicals, and health education classes. The dropout rate for teenage mothers decreased from 45% in 1973 to 10% in 1976; the fertility rate was reduced by more than 50% and has continued to decline. By 1983, four high school clinics were in operation with steadily increasing utilization of services. Twenty-two percent of the visits are for family planning; contraceptive continuance rates are a remarkable 92.8% at one year, and 86.6% at four years. Similar high school programs have been started in many cities across the nation, including Dallas and Houston (6).

Those teenagers who do become pregnant continue to need prenatal and postnatal services, as noted by Peggy Smith, PhD, and her colleagues in this issue. Pregnant adolescents are less likely than older mothers to receive medical care in the first trimester; this lack of care may contribute to the lower birth weight of babies born to teenage mothers. Teenage mothers could also benefit from services, such as child care and financial support, which enable them to stay in school and obtain an education and vocational skills. Those mothers who complete high school are more likely to become self-supporting in the future.

Adolescent pregnancy is a problem with no easy solution. Teenagers are increasingly sexually active and are pushed in that direction by our society. The comprehensive school-based clinic offers one effective way to promote responsible sexual decision making and use of contraception while lowering the dropout rate and the rate of teenage pregnancies.

LINDA A. JONES, MD
Assistant Professor of Pediatrics, the University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284.

REFERENCES

1. Teenage pregnancy and fertility trends—United States, 1974, 1980. MMWR 34:277–280, 1985.

2. Teenage Pregnancy: The Problem That Hasn't Gone Away. New York, Alan Guttmacher Institute, 1981.

3. Population Aged 15–19: Pregnancies to Females Aged 15–19 by Outcome, and Birth, Abortion, and Pregnancy Rates, by State, 1981.

New York, Alan Guttmacher Institute, 1982.
4. Families and Children Budget Section, Texas Department of Human Services, 1985.
5. Data Access Section, Texas Department of Human Services.
6. Strasburger VC: Sex, drugs, rock 'n' roll: are solutions possible?—a commentary. Pediatrics 76(4 Pt 2):704–712, 1985.

Peer review: a call for legislative assistance

This issue of *Texas Medicine* features a significant report on both the quality and quantity of medical peer review activitics, and how medical staffs rate those activities—both generally and specifically. The study comes at a most opportune time, when public and legislative criticism of our self-discipline threatens the very infrastructure of this vital quality assurance systcm.

There is an inhercnt cynicism and suspicion on the part of our legislators, and therefore our paticnts, regarding the effieacy of medical peer rcview. But, the Texas Medical Association's prompt and proactivc response to lcgislative criticism of the Statc Board of Medical Examiners, and the TMA House of Delegates' eall for a stronger peer revicw process, has rccaptured thc confidence of key legislators. Now, it is vital that we take thc necessary time to respond to inquiries about peer revicw from the press and our clected officials, and rcmain ever vigilant and vigorous in our peer review conduct. We must stay involved.

I share with many of my colleagucs in Bexar County thc frustration and anger of being threatened or intimidated with a lawsuit for simply pcrforming our rcsponsibility and duty to proper patient carc through participation in our hospitals' pcer review processes. I also have shared their frustration as district judges reinstated a disciplined doctor and enjoined us from disciplining onc. Legislative attention to this issue has bcnefitted medical eare, providing for the first time political momentum to establish a bad faith counterelaim and, therefore, the ability to recover our reasonable court and attorneys' costs in defcnse of peer review activities.

TMA's legislative agcnda for thc 70th Texas Legislature includes help in several key areas of peer review: (1) immunity from suit and frivolous suit recovery, (2) adequate funding of the State Board of Mcdieal Examiners so they may rctain sufficient staff and equipment to conduct their job, and (3) a requirement that our morc substantive disciplinary aetions be reportcd to the board so they are aware of physicians who may requirc investigation.

The TMA study (see p 91) documents what most of us always have known—a very small minority of physicians create the vast majority of the problcms in our hospitals. We must redouble our efforts at self-policing and self-improvement and urge the legislature to assist us by passing this legislation.

BERNARD W. PALMER, MD
303 Madison Square Medical Bldg, San Antonio, TX 78215.

Aftermath of a malpractice suit

It had to happen sooner or later. Lawyer Dobbins was wheeled into the emergency room on a stretcher, rolling his head in agony. Doctor Green came over to see him.

"Dobbins," he said. "What an honor. The last time I saw you was in court when you accused me of malpractice."

"Doc, Doc. My side is on fire. The pain is right here. What could it be?"

"How would I know? You told the jury I wasn't fit to be a doctor."

"I was only kidding, Doc. When you represent a client you don't know what you're saying. Could I be passing a kidney stone?"

"Your diagnosis is as good as mine."

"What arc you talking about?"

"When you questioned me on the stand you indicated you knew everything there was to know about the practice of medieine."

"Doc, I'm climbing the wall. Give me something."

"Let's say I give you something for kidney stone and it turns out to bc a gallstone. Who is going to pay for my court costs?"

"I'll sign a paper that I won't sue."

"Can I rcad to you from the transcript of the trial? Lawyer Dobbins: Why were you so sure my client had tennis elbow? Dr Green: I've treated hundreds of people with tennis elbow, and I know it when I see it. Dobbins: It never occurred to you my client could havc an Excedrin headaehe? Green: No, sir. There were no signs of an Excedrin headache. Dobbins: You and your ilk make me sick."

"Why are you reading that to me?"

"Because, Dobbins, since the trial I've lost confidence in making a diagnosis. A lady came in the other day limping . . ."

"Please, Doc, I don't want to hear it now. Give me some Demerol."

"You said during the suit that I dispensed drugs like a drunken sailor. I've changed my ways, Dobbins. I don't prescribe drugs anymore."

"Then get me another doctor."

"There are no other doctors on duty. The reason I'm here is that after the malpractice suit the sheriff seized everything in my office. This is the only plaee I can practice."

"If you give me something to relieve the pain I'll personally appeal your easc to a higher court."

"You know, Dobbins, I was sure you would someday be wheeled in on a stretcher."

"How did you know that?"

"At the trial I made a mental note that you were a prime candidate for a kidney stone."

"You can't tell a man is a candidate for a kidney stone by just looking at him."

"That's what you think, Dobbins. You had so mueh acid in you whcn you addressed the jury I knew some of it eventually had to crystallize into stones. Remember on the third day when you called me the 'Butcher of Operating Room 6'? That afternoon I said to my wife, 'That man is going to be in a lot of pain.'"

"OK, Doc, you've had your ounce of flesh. Can I now have my ounce of Demerol?"

"I better check you out first."

"Don't check me out, just give the dope."

"But in court the first question you asked me was if I had examined the patient completely. It would be negligent of me if I didn't do it now. Do you mind getting on the scale?"

"What for?"

"To find out your height. I have to be prepared in case I get sued again and the lawyer asks me if I knew how tall you were."

"I'm not going to sue you."

"You say that now. But how can I be sure you won't file a writ after you pass the kidney stone?"

ART BUCHWALD

Copyright 1986, Los Angeles Times Syndicate.

In pursuit of advocacy—the extra step

The body politic has conducted a love/hate relationship with medicine in some degree since the end of World War II. Much of this is detailed in *The AMA and US Health Policy Since 1940* by Frank D. Campion (1). There are many facets of this relationship, but we all know most of them in one form or another. Public approval of physicians declines steadily, while private approval (what one thinks of his own doctor) remains as high as ever.

The question of whether health care is a right, underwritten by government resources, has largely been decided in the affirmative. But, when this open-ended program threatened to bankrupt the nation, rather than seeing a reexamination of the premise, we saw the politics of expectation at play. The "rich" doctors were castigated, payments were trimmed in a number of ways, and patients saw their "entitlement" shrink in value. One school of thought is to view medicine as a public utility, subject to the stringent regulations that go with it. The politics of expectation has extended to the courts, where any adverse result, whether or not due to negligence, can result in large rewards. The sequel disruption of the liability insurance market threatens availability of medical care and contributes to escalating costs.

If one can accept the operating premise that the welfare of physicians and that of their patients is intimately entwined, then the imperative for our actions is clear. We must do whatever is necessary to protect our patients—and in so doing we protect ourselves.

The effort in this regard, developed by medicine over the past quarter of a century, has been twofold. We have legislative councils at the national and state levels that scrutinize legislation, develop policy responses, and affect legislative effort through an able lobbying staff. The complement to the legislative approach is political action.

The objective of political action, both at the AMA level (AMPAC) and the state level (TEXPAC), is to support the legislative agenda of medicine, seeking what is best for our patients. To do this, AMPAC and TEXPAC are and must be nonpartisan and nonideological. This is a hard fact for many physicians to accept. They interpret nonpartisanship to mean "representing no principles." In fact, there is an overriding principle: We support the legislative agenda. In so doing, we take our friends where we find them. It so happens that the people who understand our cause are usually of a conservative persuasion. Thus, on a grading scale, Republicans and "Tory" Democrats form a heavy majority at the top. It should be no surprise that TEXPAC heavily supports these people. Yet we hear the complaint that TEXPAC is "too conservative" or "too Republican." Since a majority of Texas legislators are Democrats, we support more Democrats overall statewide than Republicans, giving rise to the alternate complaint that TEXPAC is "too Democratic." Again, we take our friends where we find them, irrespective of party or ideology.

When we manage to get a friend in office, we automatically support that person, come what may. Even if a challenger is more friendly or, as usually is the case, promises to be more friendly; we stay with the incumbent. To do otherwise would cost TEXPAC heavily in credibility. This is the basis of TEXPAC's "friendly incumbency" policy.

In an open race (no incumbent), we take three elements into consideration: Firstly, we examine the candidates' track records regarding actions toward medicine in other arenas. We give some heed to stated positions, but nothing compares with a track record for verifying a candidate's inclinations. Secondly, we obtain local recommendations—what the doctors and their spouses, who will be the winner's constituents, think of each candidate. Lastly, we take into account the winnability factor. Demographics of preceding elections can often keep us from pouring money into a losing cause.

In politics there are no prizes for second place. In the 1986 general election, TEXPAC supported 73 winners out of the 76 races we entered. (Many general election races were uncontested.) This phenomenal record is more than just a bragging point. Support at any time, but particularly in a contested election, translates into access to the office-holder and a hearing for medicine's side of the story. This is especially important on the tough, controversial votes. On a close call, all things being equal, a legislator tends to "dance with those that brung him."

TEXPAC has been in existence since 1961. Its success can be measured best by what hasn't happened. Despite some contemporary developments, we have the most optimal practice environment in this country, if not the world. We can count a majority in the state legislature among our friends. The Texas congressional delegation is the most pro-medicine of any such grouping. Moreover, in our absence, other organizations *do* participate in the process, and not always to the benefit of health care issues. And yet, it is apparent that a majority of physicians and their spouses do not understand TEXPAC. The ones who do participate make TEXPAC the strongest and most effective of all the medical political action committees, but think of what could be done with majority participation!

If you are truly an advocate for your patients, and if you accept the necessity for legislative advocacy, then you should

understand the necessity for supporting TEXPAC. Minimal support consists of paying TEXPAC annual dues of $100 for the physician and $35 for his or her spouse. This is a core issue in our profession. The welfare of our patients, and ultimately ourselves, hinges on it.

HAROLD C. BOEHNING, MD
Chairman, TEXPAC, 3600 Gaston Ave, Barnett Tower, Suite 409, Dallas, TX 75246.

REFERENCES

1. Campion FD: The AMA and US Health Policy Since 1940. Chicago, Chicago Review Press, 1984.

You, too, can celebrate Be-Kind-to-Consultants Month

This is it—the pay, the thanks, the glory! It's Be-Kind-to-Consultants Month! We're saying "Thank you" to the 350-plus Texas physicians and other professionals who are the backbone of *Texas Medicine's* peer review system for articles.

We use them shamelessly, prod them when their "to do" stack has our stuff in it too long, and, if they're especially prompt and thorough, we send them more work. These physicians have earned our respect, our appreciation, and our gratitude, and they could use a few kind words from their colleagues. Pass it on.

The consultants whose names appear here are the ones we have called upon during calendar year 1986. Their voluntary review services help keep this journal's articles accurate, reliable, clear, and readable.

Every paper submitted to *Texas Medicine* goes to at least one consultant—a specialist in the field—for review. At the same time, the paper is sent to two members of our Editorial Committee, whose names appear on page 3 of every issue. The three independent reviews, and the paper, then go to the Editorial Committee chairman for a decision.

Peer review gives the author a chance to see his or her paper through a reader's eyes. Often, reviewers' comments lead to clearer, better-organized, stronger papers, and most authors are pleased with the improvement.

As a reader, you benefit also. Someone has sorted the wheat from the chaff, and your reading is easier.

So, please, if you see one of *Texas Medicine's* consultants, say "It's your month! Thanks."

And be kind.

RAE VAJGERT
Managing Editor, *Texas Medicine*

1986 primary consultants for Texas Medicine.

Maurice Adam, MD, Dallas
Holly Alt, JD, Austin
Fritz E. Barton, Jr, MD, Dallas
James A. Belli, MD, Galveston
Robert Bernstein, MD, Austin
William J. Block, Jr, MD, San Antonio
George R. Blumenschein, MD, Arlington
Gerald P. Bodey, MD, Houston
John A. Boston, Jr, MD, Austin
Charles L. Bowden, MD, San Antonio
Chester R. Burns, MD, Galveston
Grover L. Bynum, Jr, MD, Austin
Milton A. Cardwell, Jr, MD, Irving
Ugo Carpentieri, MD, Friendswood
Dolores M. Carruth, MD, Dallas
Don B. Cauthen, MD, Temple
John S. Chapman, MD, Dallas
Cecil A. Childers, Jr, MD, Corpus Christi
James L. Claghorn, MD, Houston
William Kemp Clark, MD, Dallas
Burton Combes, MD, Dallas
John J. Costanzi, MD, Galveston
Kim S. Culp, MD, Temple
Richard D. Cunningham, MD, Temple
Charles W. Daeschner, Jr, MD, Galveston
Merle W. Delmer, MD, San Antonio
Warren F. Dodge, MD, Galveston
William L. Draper, MD, Houston
John E. Dvoracek, MD, Temple
Walter P. Dyck, MD, Temple
Ralph D. Feigin, MD, Houston
Alan R. Felthous, MD, Galveston
Donald J. Fernbach, MD, Houston
William S. Fields, MD, Houston
Melvin Fox, MD, El Paso
William G. Gamel, MD, Austin
Norman F. Gant, MD, Dallas
C. E. Gibbs, MD, San Antonio
Wallace A. Gleason, MD, Houston
Joseph W. Goldzieher, MD, San Antonio
N. Maxwell Goodloe, MD, Houston
Tracy R. Gordy, MD, Austin
Eugene Gowan, III, MD, Temple
James M. Graham, MD, Austin
Ralph G. Greenlee, MD, Rockport
Donald M. Greer, Jr, MD, San Antonio
George J. Handley, MD, Austin
Harold R. High, MD, Cuero
John D. Hudson, MD, Austin
Robert W. Huff, MD, San Antonio
Waldemar G. Johanson, Jr, MD, Galveston
Sam N. Key, III, MD, Austin
Saul Kit, PhD, Houston
Robert A. Laibovitz, MD, Austin
Joseph S. Lancaster, MD, Austin
Virgil B. Lawlis, MD, Austin
John C. Leadbeater, MD, Temple
Harry M. Little, Jr, MD, Galveston
William E. Locke, MD, San Antonio
H. Edward Maddox, III, MD, Houston
T. C. McCormick, Jr, MD, Buda
John J. McDermott, PhD, College Station
William J. McGanity, MD, Galveston
William Gordon McGee, MD, El Paso
Henry C. McGill, Jr, MD, San Antonio
William F. McLean, MD, Austin
Joseph L. Melnick, PhD, Houston
Robert Newman, PhD, Houston
Stephen R. Newmark, MD, Temple
Sam A. Nixon, MD, Houston
Merle Olson, PhD, San Antonio
Joseph T. Painter, MD, Houston
Robert L. Palmer, II, MD, Temple
Jack Peacock, MD, El Paso
James K. Peden, MD, Dallas
Henry Perkins, MD, San Antonio
Lee R. Radford, MD, Dallas
Howard M. Radwin, MD, San Antonio
Leonard M. Riggs, Jr, MD, Dallas
Arnold J. Rudolph, MD, Houston
Kim Ross, Austin
William F. Ross, MD, Dallas
Michael Rotman, MD, Austin
Kenneth E. Salyer, MD, Dallas
Duke S. Samson, MD, Dallas
Jerry Sayre, MD, Gatesville
H. Irving Schweppe, Jr, MD, Houston
John R. Seals, MD, San Antonio
George L. Sharpe, MD, Austin
John R. Shull, MD, Dallas
Alice L. Smith, MD, Dallas
Betty P. Stephenson, MD, Sugar Land
Jose M. Trujillo, MD, Houston
Harold C. Urschel, Jr, MD, Dallas
Theodore P. Votteler, MD, Houston
Otto J. Waddell, MD, Dallas
Drue O. D. Ware, MD, Fort Worth
Elgin W. Ware, Jr, MD, Dallas
Rocky Wilcox, JD, Austin
Nathan L. Wright, MD, Texarkana
Marion Zetzman, DrPH, Dallas

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

TAKE ADVANTAGE OF OUR SPECIAL MEDICAL LEASE RATES.

1987 325 **$290.73** per mo.	1987 528ea **$328.11** per mo.	1987 535is **$484.91** per mo.
1987 635csi **$660.78** per mo.	1987 735i **$577.37** per mo.	

Over 150 new BMW's to choose from. All with A.B.S. brakes, 3 year/36,000 mile warranty and 24 hour emergency roadside service.

Prices based on a 60 month closed end lease. Customer to pay first month's payment, security deposit, tax, title and license fees at inception of contract.

The New

BMW CENTER

FACTORY AUTHORIZED.

4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

Let's add chest x-ray to breast cancer screening

I am enormously supportive of the pleas made by Drs Charles A. LeMaistre and George N. Peters, in the November 1986 issue of *Texas Medicine*, for early detection of female breast cancer. The massive screening program planned for early 1987 will reveal a sufficient number of unknown breast malignancies "to save 12,000 lives each year."

Attention begs to be drawn to the significant crossover which occurred in 1985, when lung cancer became the leading cause of death amongst women. This places the female patient pool at a greater risk of death from lung cancer than the one in 11 calculated for breast cancer.

I am proposing that a chest x-ray be included with each mammogram, at least for the woman who smokes, during the planned screening project. With this approach will the profession be pursuing the awesomeness of breast cancer, and the devastating results of lung cancer—the least survivable of any cancer, yet one of the most preventable, when cigarette smoking ultimately comes to its end.

For all diagnostic x-ray procedures, radiation exposure is maintained as low as is reasonably possible to accomplish the investigation. It is estimated that combining a mammogram with a chest x-ray would expose the female smoker to a negligible radiation risk, something less than one-tenth the allowed 5 rem per year for those persons working in x-ray clinics.

The cost for the additional x-ray diagnostic procedure can be considered minimal when weighed against the early recognition of pulmonary pathology. The American Cancer Society estimates that in 1987, Texas will be burdened with 8,000 new lung cancer cases, for both sexes. What a great opportunity to screen for early lung cancer in those women smokers who will participate in the forthcoming breast cancer screening project!

It is problematical to estimate the number of lives that can be saved by attempting such an extensive cancer screening project. However, for that one woman who is diagnosed early in her lung cancer disease, her survival represents 100%.

RAYMOND H. ABRAMS, MD
Swiss Avenue Medical Bldg, 3434 Swiss Avenue, Dallas, TX 75204.

DO YOU KNOW A DOCTOR— WHO NEEDS OUR HELP?

If you can answer "yes" to any one of the questions below:
Do you know a doctor who—
- is experiencing problems **coping** with patients or with the normal stress of a busy practice?
- becomes easily **depressed** or easily annoyed?
- **drinks** more than a moderate amount?
- is self-prescribing mood-altering **drugs?**

—then, you may know a doctor who needs our help. If you feel that you, a colleague, a resident or student need counseling or treatment, won't you give us an opportunity to help? (Strictly confidential contacts can be made through our HOTLINE. Call us collect, anytime.)

HOTLINE—512 477-5575

TMA Committee on
Physician Health & Rehabilitation

David C. Eiland, Jr., M.D., Galveston, Chairman (409) 761-4776
Richard L. Weddige, M.D., Lubbock, Vice Chairman (806) 743-2800
G. Hulse Wagner, M.D., Wichita Falls (817) 766-3551
Guy K. Driggs, M.D., Dallas (214) 941-3313
Neal H. Gray, M.D., San Antonio (512) 697-9792
Victor Carlson, M.D., Houston (713) 659-3046
A. Bryan Spires, Jr., M.D., Lubbock (806) 743-2929
Thomas H. Allison, M.D., Mabank (214) 563-6452
Gretchen L. Megowen, M.D., Dallas (214) 696-8227
Caroline Fife, M.D., Dallas, Resident Representative (214) 879-1000
Mrs. Dor Brown, Fredericksburg, Auxiliary Representative (512) 997-3615
Rajesh K. Davda, Temple, Student Representative (817) 778-0452
Misty Dawn Laughlin, Bryan, Alternate Student Representative (409) 696-2400

Is your malpractice insurance geared to the past, instead of the future?

Protecting today's physicians from the onslaught of malpractice litigation is a new game. Back when malpractice lawsuits were rare, old insurance companies sold malpractice policies to just about anyone. Cheap.

Then the malpractice crisis of 1975 appeared—and the new age of malpractice protection arrived. Some of the old insurance companies knee-jerked away from their commitment to Texas and Arkansas physicians.

That's when we founded API to offer the kind of complete protection that the old insurers didn't offer. For all specialties. With ample limits. API plans to offer this complete protection in 1995, 2005 and beyond. Modern, complete insurance coverage must adapt to change. And in malpractice insurance, complete protection is all that counts.

You don't have to settle for less. API guarantees complete protection for today and the future.

When you're ready for complete malpractice protection, call us. We'll be here.

American Physicians Insurance Exchange
1301 Capital of Texas Highway South
Austin, Texas 78746
512-328-1520
Nationwide 1-800-252-3628

A Referral Center for Cardiopulmonary Diseases

Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address: P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA - SUBCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

News

TMA IN ACTION

Judge denies request for relief from Medicare fee provisions

Following a hearing in Dallas, a federal district judge has denied a motion for a preliminary injunction against new Medicare fee control provisions.

Texas Medical Association, along with the American Medical Association and the Lubbock-Crosby-Garza and Dallas county medical societies, requested a temporary restraining order on Christmas Eve in Lubbock. Judge Barefoot Sanders' denial followed two such orders that extended from Dec 31, 1986, to Jan 20, 1987, the deadline for physicians to decide whether to become participating or nonparticipating physicians. (The Department of Health and Human Services subsequently extended the deadline to Jan 30.)

At press time, the plaintiffs were considering an appeal of Judge Sanders' ruling.

For further information on the Medicare lawsuit, see this month's "Medicine and the Law" column, beginning on p 96.

Hospital leadership conference features distinguished speakers

The Hospital Medical Staff Leadership Conference, April 3–5, 1987, at the Marriott Riverwalk Hotel, San Antonio, will feature Texas Sen Chet Brooks (D-Pasadena), Texas State Board of Medical Examiners Executive Director G. Valter Brindley, MD, and American Medical Association Executive Vice President James H. Sammons, MD. They will be joined by a host of other distinguished speakers.

Cosponsored by Texas Medical Association and the Texas Hospital Association, the conference is designed to assist physicians in developing their leadership and communication skills, as well as utilizing their time and services efficiently and effectively in carrying out their hospital medical staff responsibilities and practicing in the hospital setting. The program qualifies for 12 hours in category 1 of the Physician's Recognition Award of the American Medical Association.

In addition to Senator Brooks and Drs Brindley and Sammons, the conference faculty includes Jim Bob Brame, MD, Eldorado, president, Texas Medical Association; Judson Cramer, Fort Worth, past president and member emeritus, Texas Association of Hospital Governing Board Members; Guy Dalrymple, FACHE, Austin, retired administrator, Baptist Hospital of Southeast Texas; Arthur M. Faris, Jr, MD, Houston, chief of staff, Park Plaza Hospital; and Larry Mathis, FACHE, Houston, president and chief executive officer, The Methodist Hospital System.

Other faculty members are Barbara Miller and Margaret Keys, Austin, communications consultants, Miller-Keys Associates; Penny O'Malley, Beverly Hills, Calif, director, Department of Medical Affairs, American Medical International; William F. Ross, MD, Dallas, chairman, Department of Family Practice, Southwestern Medical School; Jerry Sconce, Dallas, regional administrator, Health Care Financing Administration; Ron Smith, FACHE, Fort Worth, chairman of the board, Texas Hospital Association; and Rocky Wilcox, JD, Austin, general counsel, Texas Medical Association.

They will discuss a variety of topics, including state legislation, the federal government and health care delivery, problem physicians, in-hospital studies, the future of hospitals and medical staffs, and effective leadership, management, and communication.

The deadline for registration for the conference is March 20. The fee is $185 per person. Additional information is available from John Boff or Susan Reed, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512) 477-6704, ext 260.

Sunrise sessions feature variety of topics for early risers

When members and guests of Texas Medical Association convene May 13–17 in downtown Houston, they will be exploring new opportunities and solving common problems in the numerous programs being presented in the 1987 Annual Session.

Many of the early risers will have a head start with attendance at the Sunrise Sessions. The informal programs, featuring both association members and out-of-state guests, are held Thursday, Friday, and Saturday mornings of the session, 8:15 to 9:15 am. The programs provide brief presentations by the speakers, with the majority of the time devoted to an open forum. Refreshments are available. An array of topics of interest to many specialists are scheduled.

On Thursday, May 14, Rudolph P. Galask, MD, will discuss "Surgical Prophylaxis in Obstetrics/Gynecology: Current Management and Future Implications." Dr Galask is professor of obstetrics and gynecology and microbiology in the Department of Obstetrics and Gynecology at The University of Iowa College of Medicine, Iowa City, Iowa.

The program for Friday, May 15, features Gordon H. Williams, MD, on "Patient Compliance of Antihypertensive Treatment." Dr Williams is chief of the endocrinology-hypertension service and professor of medicine at Harvard Medical School, Boston. Also on Friday, Stanley H. Appel, MD, professor and chairman, Department of Neurology, Baylor College of Medicine, Houston, will discuss "Advances in Alzheimer's, Amyotrophic Lateral Sclerosis and Parkinson's Disease."

Other topics and speakers for Friday are: "Aspects of Child Development," Douglas B. Hansen, MD, professor of clinical psychiatry, Baylor College of Medicine, Houston; "Breast Imaging with Techniques other than Mammography," Edward A. Sickles, MD, chief, Breast Imaging Section and associate professor of radiology, University of California School of Medicine, San Francisco; and "Clinical Management of Adolescents with Insulin-dependent Diabetes Mellitus," Julio V. Santiago, MD, professor of pediatrics, Washington University School of Medicine, St Louis.

Sunrise Sessions on Saturday, May 16, will feature five topics: "Sports Injury and Overview," as presented by Stanley A. Herring, MD, assistant team physician, University of Washington, Seattle; "Recent Advances in Stroke Treatment," by Frank M. Yatsu, MD, Department of Neurology, University of Texas Medical School, Houston; "Evaluation of the Geri-

READ IT AND REAP!

Cost per $1000 monthly benefit
TEXAS MEDICAL ASSOCIATION
Long Term Disability Insurance

WHAT YOU PAY . . . based on a 30 day waiting period.

Your Age:	Monthly Cost*	Average monthly cost based on your present age for continuous coverage to age 70:
Less than age 30	$ 6.33	$28.79
30–39	7.33	32.00
40–44	14.83	36.11
45–49	21.83	40.37
50–54	30.67	45.00
55–59	47.33	49.78
60–64	52.17	51.00
65 & Over	49.83	49.83

*Payments are made on a quarterly basis. Costs are based on current rates.

WHAT YOU GET . . . at no additional cost:

- ✓ Bonafide long-term benefits for total disability to age 70—through the critical years.
- ✓ Long term benefits for partial disability.
- ✓ Definition of disability protects you at your medical specialty—all ages.
- ✓ Up to $8000 monthly benefits regardless of other disability insurance you may have.
- ✓ Claim payments are not reduced by monies you may receive from other disability policies, salary continuation, investments, Social Security.
- ✓ During partial disability, pre-disability earnings are automatically increased by 6 percent annually to guard against erosion of amounts payable.
- ✓ Your waiting period for partial disability is the same as you select for total disability.
- ✓ Survivor Benefit.

WHAT YOU DO NOT GET . . .

- ⊘ Costly frills
- ⊘ Termination at 65—during the critical years
- ⊘ Lesser benefit period after age 60 (See example, page 10, TMA brochure)

OPTIONAL COVERAGES . . .

- ✓ Cost of Living Guardian
- ✓ In-hospital Disability Income

If you do not have a TMA Insurance Brochure dated August, 1986
Call 1-800-252-9318

Texas Medical Association
INSURANCE PROGRAM
1901 North Lamar Blvd, Austin, TX 78705
underwritten by
PRUCO Life Insurance Company of Texas
a subsidiary of the Prudential

atric Patient," by Eric Pfeiffer, director, Suncoast Gerontology Center, University of South Florida Medical Center, Tampa, Fla; "Current Experience with Outpatient Infusion Chemotherapy," by Robert S. Benjamin, MD, Medical Oncology Department, M.D. Anderson Hospital and Tumor Institute, Houston; and "Liver Transplantation Today," by Elliott Alpert, MD, professor of medicine, Department of Medicine, Baylor College of Medicine, Houston.

AMA officials available to visit group practices

The American Medical Association offers many activities and resources that are of value to group practices. The association's officers and trustees would like to make personal visits to group practices so they can describe what the AMA offers on behalf of physicians who practice in groups.

To arrange for an AMA officer or trustee to visit a group practice, call or write Dolores Pavela, Director, Office of Officer Services, AMA, 535 N Dearborn, Chicago, IL 60610, phone (312)645–4466.

HEALTH LINE

Health officials express concern about popular Mexican diet

Texas health officials are concerned about the growing popularity of drugs prescribed and dispensed in Mexico to Texans wanting to lose weight. The so-called "Mexican diet" is a regimen of stimulants, antihistamines, depressants, laxatives, diuretics, and a thyroid-like hormone, usually combined in three pills. The Mexican brand names for the most common pills are Moduretic, Redotex, and Ponderex, none of which have Federal Drug Administration approval for use in the United States.

Robert Bernstein, MD, Texas commissioner of health, says that physicians should be alert to possible side effects these drugs may have on their patients.

Problems arise when persons with heart trouble, diabetes, high blood pressure, or other conditions take the pills. These people sometimes suffer extremely high blood pressure, irregular heart beat, diarrhea, cramps, or metabolic upsets. Another side effect may be drug dependence.

At least three deaths of persons using the pills have been reported.

"The main reason the 'Mexican diet' is popular is that some people who have taken the drugs have lost many, many pounds—some claim 50 or more pounds in a few months—without noticeable side effects. Word-of-mouth claims like that spread quickly among people tired of trying and failing to lose weight. Therefore, many people are drawn to the border, particularly Laredo, to buy and try the pills," Dr Bernstein said.

Dr Jorge Rubio originated the diet plan in Nuevo Laredo, Mexico. Since its popularity has grown, more physicians in Mexico reportedly have devoted their practices to dispensing prescriptions for the pills. Some patients who have bought the prescriptions report never having seen the doctor. Others state that prescriptions are sometimes issued to whole rooms full of patients, without individual examinations.

The Mexican doctors are under no legal obligation to screen patients before prescribing the drugs, which are legal in Mexico. Also, quality control of both the suitability of the drugs for a given patient and the condition of the drugs at purchase are outside the jurisdiction of US authorities.

"At this stage, we hope the medical community will remain alert to the influences the 'Mexican diet' might have on the conditions of the patients under their care. We welcome further information concerning side effects and associated deaths, since the extent of the danger posed by these pills is yet uncertain," Dr Bernstein said.

Eye care project Helpline receives 6,371 Texas calls

Through the National Eye Care Project (NECP), Texas ophthalmologists have diagnosed 874 cases of cataracts, 81 cases of glaucoma, 189 cases of macular degeneration, and 36 cases of diabetic retinopathy.

The National Eye Care Project, which offers medical eye care to the disadvantaged elderly at no out-of-pocket cost, is sponsored by the Texas Ophthalmological Association and the Foundation of the American Academy of Ophthalmology. It is available to US citizens or legal residents, age 65 or over, who are not currently under the care of an ophthalmologist, and who have not seen one within the past three years.

Since the Texas Helpline (1–800–222–EYES) opened on Feb 10, 1986, more than 6,371 residents have called, resulting in more than 4,285 referrals of elderly patients to local volunteer ophthalmologists for medical examination and possible treatment for sight-threatening eye disease.

Nationwide, more than 140,000 elderly Americans have called the Helpline number. Thirty-four percent of those examined said that they had never had a comprehensive medical eye examination.

The toll-free Helpline is open weekdays from 8 am to 5 pm.

Heart disease deaths decline during 1985

Deaths from heart disease in 1985 accounted for 43.6% of deaths in Texas, according to the American Heart Association, Texas Affiliate. AHA computations, using Texas Department of Health vital statistics, show that 51,539 people (26,238 men and 25,301 women) died of heart and blood vessel diseases in 1985.

Of those deaths, diseases of the heart accounted for 40,079 deaths; hypertension, 367 deaths; cerebrovascular disease, 8,793 deaths; and atherosclerosis, 1,278 deaths. Diseases of the arteries, arterioles, and capillaries caused 1,022 deaths.

During the past 31 years, the percent of deaths attributed to heart disease slowly rose, peaked in the early 1960s, and then slowly decreased to its current new low. In 1966, more than half of all deaths were caused by heart disease.

"The American Heart Association credits this dramatic turnaround to an increased public awareness of heart healthy lifestyle habits, increased efforts in prevention, and innovations in diag-

nosis and treatment of heart disease," said Addison A. Taylor, MD, president of the AHA, Texas Affiliate. "However," Dr Taylor continued, "it is not possible to determine whether the decline in death rate reflects a reduction in the frequency of attacks, or an improvement in life expectancy after an attack, or both."

SOCIOECONOMICS

Number of physicians growing at slower pace, report says

The number of physicians in Texas grew at a slower rate between 1985 and 1986 than it did between 1984 and 1985, according to the "Profile of Physician Manpower in Texas," a publication of Texas Medical Association's Council on Medical Education.

In 1986, there were 27,856 physicians practicing in Texas, which was only a 1.4% increase over the 27,457 licensed Texas physicians in 1985. From 1984 to 1985, there was a 2.4% increase among Texas physicians. The report adds that according to the Center for Health and Manpower Policy Studies, University of Texas School of Public Health, the number of physicians practicing in Texas increased by more than 70% during 1970–1980.

Among other items of interest in the report:

—Of the 27,856 licensed physicians in Texas, 23,497 are in direct patient care (including interns and residents), representing 84.35% of all licensed physicians residing in Texas.

—Of the 27,856 licensed physicians practicing in Texas, 12,635 (45.35%) were in primary care specialties in 1986.

—The specialty with the largest number of practitioners was internal medicine, with 3,489 (12.52%) of the 1986 licensed physicians indicating it as their primary specialty.

—The mean age of the 23,497 licensed physicians in direct care was 45.8 as of August 1986.

—The specialty with the lowest mean age in 1986 was immunology at 37.0, and the specialty with the highest mean age was hypnosis at 72.0 (only one physician indicated this as his primary specialty) followed by general preventive medicine at 66.0 (only two physicians practicing in this specialty). Gerontology had a mean age of 66.6.

The report also contains statistics on medical students, postgraduate education programs, physician employees, manpower shortage areas in Texas, projections of physician supply, and foreign medical graduates.

The profile is the third in a planned series of annual reports on physician manpower in Texas. Copies of "Profile of Texas Physician Manpower 1986" are available for $22.50 from Carla Schaefer, Department of Medical Education, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704, ext 255.

Medical examiners rule on reimbursement for drugs

The Texas State Board of Medical Examiners has adopted regulations on physician reimbursement for drugs supplied to their patients under authority of the Medical Practice Act. These regulations became effective Jan 2.

The regulations state that a physician may be reimbursed for the cost of supplying drugs to his patients only if the physician practices in a rural area meeting the requirements of Section 5.09(b) of the Medical Practice Act or if the drugs are administered to patients.

These regulations reflect two Texas Attorney General Opinions interpreting the Medical Practice Act. TMA's general counsel recommends that physicians who are solicited by distributors of prepackaged medications be mindful of the regulatory restrictions.

CAPITAL COMMENTS

Senate committee reports on Alzheimer's disease

Respite care, which gives primary caregivers temporary relief from the day-to-day demands of caring for a sick loved one, is the "single most needed health care service" for Texans with Alzheimer's disease, according to a report from the Texas Senate Committee on Health and Human Resources.

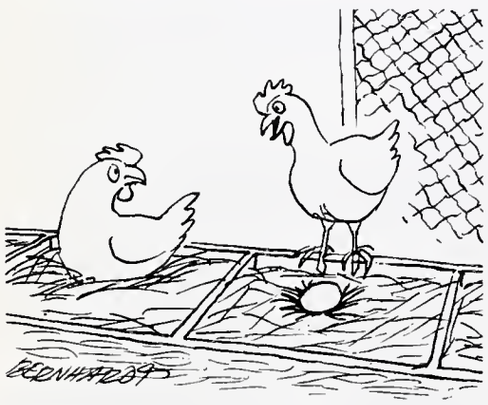
The committee report observes, "As the disease progresses, the caregivers are forced to curtail or totally abandon a semblance of normal life. They are also victims of Alzheimer's disease as they become more and more isolated, expend their family resources, and watch their loved ones degenerate. At a time when the comfort and support of visiting friends or going to church may be most needed, many caregivers must give up those activities."

According to the report, it is estimated from 115,491 to 145,668 persons over age 65 in Texas currently have Alzheimer's disease. Most persons (74%-79%) are cared for at home. However, more than 30,000 Alzheimer's patients are in nursing homes. An estimated 12,000 to 14,000 persons under 65 years have the disease. The cost of caring for Alzheimer's victims in Texas in 1986 is estimated to be $1.5 to $1.8 billion.

The committee report offers the legislature 31 recommendations, including the establishment of a Texas Council on Alzheimer's Disease and Related Disorders, with members from the medical and health care community, academic community, primary caregiver population, advocacy associations, and private citizenry. The committee suggests that the Texas Department of Health should be designated the lead agency and provide staff support to the council.

The committee also recommends:

1. Educational efforts aimed at Alz-



"I'm certainly glad to get rid of that cholesterol."

Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975, 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the original hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. 5685

1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med*, 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

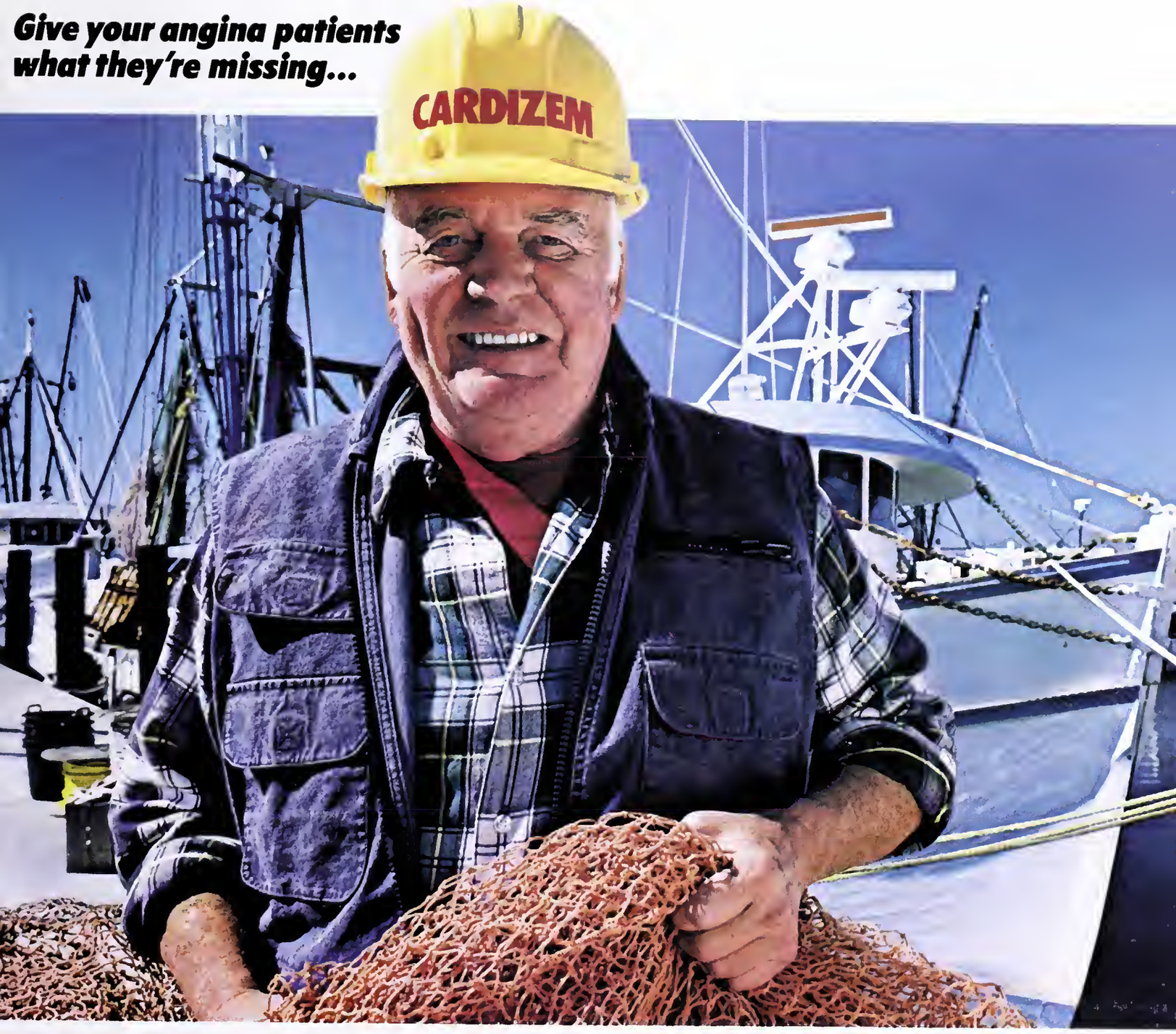
© 1986, BASF K&F Corporation

5768/9-86 Printed in U.S.A.

vicodin® III

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

Give your angina patients what they're missing...



CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3]****
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 7/86

See complete Professional Use Information before prescribing

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers. Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983; 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesowoy R, Human DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39*
5. *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

Another potent benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0246M6

heimer's disease being recognized as a physical disease rather than a mental disorder;

2. Policies that offer Alzheimer's victims a broad range of health and personal care services (including community based care and in-home services) and offer the primary caregivers help in the form of respite services and other family support activities;

3. A collaborative broad-based research effort to find the cause and cure, improve treatment interventions and diagnostic procedures, and identify effective management strategies;

4. Greater emphasis on training primary caregivers and health professionals responsible for Alzheimer's victims; and

5. The development of methods to provide long-term care coverage for catastrophic illnesses, including community-based and institutional services.

Senator Chet Brooks (D-Pasadena) chaired the committee that authored the report. Also serving were Vice Chairman Sen Hector Uribe (D-Brownsville), and Senators Gonzalo Barrientos (D-Austin), Chet Edwards (D-Duncanville), Hugh Parmer (D-Fort Worth), John Sharp (D-Victoria), Carlos Truan (D-Corpus Christi), Craig Washington (D-Houston), and John Whitmire (D-Houston).

NEWSMAKERS

CARL POCHEDLY, MD, has been appointed codirector of the Austin, Tex, Children's Cancer Center, and coordinator of hematology/oncology for the Austin Pediatric Education Program, Brackenridge Hospital. He is clinical professor of pediatrics, University of Texas Health Science Center at San Antonio.

The University of Texas M.D. Anderson Hospital and Tumor Institute has honored three oncologists. CHARLES G. MOERTEL, MD, received the 21st annual Heath Memorial Award for outstanding basic science contributions to improved care for cancer patients. LAWRENCE H. EINHORN, MD, received the 11th annual Jeffrey A. Gottlieb Memorial Award for contributions to therapeutic cancer research. ROBERT H. RIDDELL, MD, received the 10th annual Joanne Vanderberge Hill Award for contributions of pathology to improving cancer diagnosis.

WILLIAM T. BUTLER, MD, Houston, president of Baylor College of Medicine, has been elected to a three-year term on the board of directors of the Association of Academic Health Centers (AAHC).

FRANK G. MOODY, MD, Houston, has been named the first Dr Denton A. Cooley Professor of Surgery at The University of Texas Health Science Center at Houston. The professorship was established in December 1986 to honor Dr Cooley, surgeon-in-chief at the Texas Heart Institute and clinical professor of surgery at The UT Medical School at Houston. Dr Moody is professor and chairman of the department of surgery at UT Medical School and surgeon-in-chief at Hermann Hospital in Houston.

J. TAYLOR WHARTON, MD, has been named chairman of the department of gynecology at The University of Texas M.D. Anderson Hospital and Tumor Institute. Dr Wharton joined M.D. Anderson in 1971 as an assistant professor of gynecology and became professor of gynecology in 1979. He has served as deputy department chairman of the department of gynecology since 1980.

WILLIAM B. NEAVES, PhD, has been appointed interim dean of UT Southwestern Medical School to serve until a permanent dean can be appointed. Dr Neaves will continue as dean of UT Southwestern Graduate School of Biomedical Sciences, a position he has held since 1980.

1 800 252-7003 (In Austin, call 479-7894)

Get current information on health and medical legislation before the Texas Legislature. The brief recorded message is updated each weekday at 10 am.

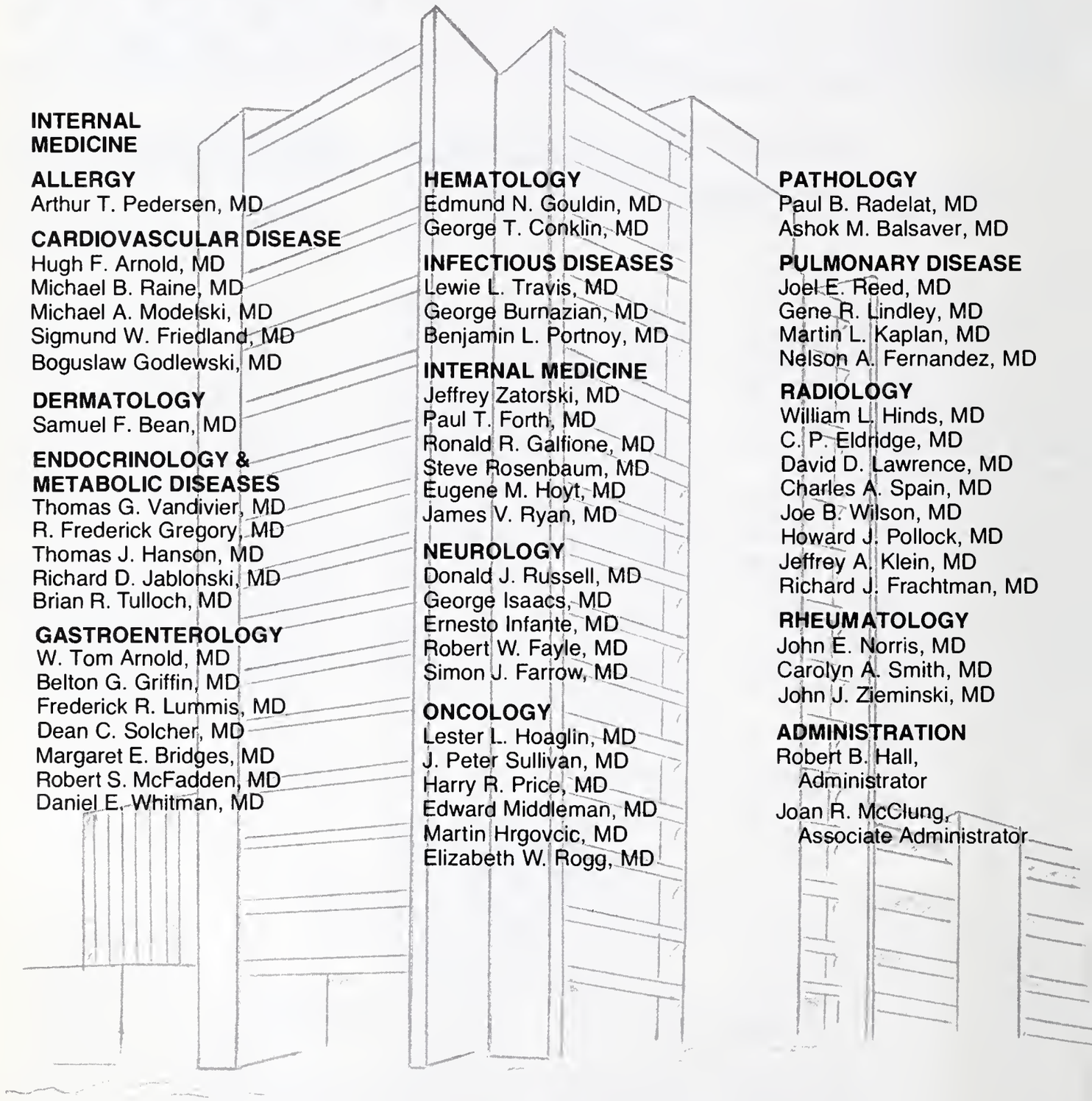
A service of the Texas Medical Association Communication Department, in cooperation with the Division of Public Affairs.

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH



INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Robert S. McFadden, MD
Daniel E. Whitman, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
Eugene M. Hoyt, MD
James V. Ryan, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

1987 Calendar Of Workshops

Sponsored By The Texas Medical Association

For your information: This is your calendar of workshaps and seminars sponsared by the Texas Medical Assaciation during 1987.

Keep this in a convenient place for easy reference. Tack it to your bulletin board! Please feel free to contact us when you have questians: **TMA Practice Management Workshops, 1801 North Lamar Blvd., Austin, Texas 78701, 512/477-6704, ext. 262.**

All workshop registration information will be mailed approximately six weeks prior to the scheduled time for each series.

How to Get Started in Medical Practice is a two-day series for physicians who plan to go sala, jain a partnership ar group practice, ar need direction an which way ta go. Concepts presented in this workshop will help avoid many medical practice management prablems. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. No registration fee for senior residents currently enrolled in a recognized Texas residency program. Registratian fee for others: TMA member, $115; non-member, $140.

Insurance Claims Preparation, Coding and Documentation is a half-day workshop that facuses on the "how-to's" of insurance claims preparation and coding with special emphasis on medical, surgical, and diagnostic coding. Workshop material includes sample claim forms and actual case histories fram which to learn. Faculty: Harold Whittington & Associates, Dallas. Registration fee: TMA member, $75; non-member, $100.

How to Improve Your Third-Party Reimbursement is a half-day workshop presented in canjunction with the coding series described above. The series is designed to help physicians and their office staffs gain a better understanding of the Medicare/Medicaid reimbursement system and how to obtain appropriate third-party reimbursement. Faculty: Harold Whittington & Associates, Dallas. Registration fee: TMA member, $75; non-member, $100.

Medical Office Management Institute (MOMI) is a week-long series af in-depth programs specifically designed for medical affice managers, supervisors and office staff. The one-day workshops include **Computers in Medical Practice, Patient Flow Management, Personnel Management, Personnel Problem Solving** and **Financial Management.** Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Registration fee: TMA member, $120 for each one-day workshop; $525 for all five workshops. Nan-member, $155 for each one-day workshop; $700 far all five workshops.

Practice Management Series includes two half-day warkshops designed for the physician who has been in practice a few years and far the entire office staff. The workshops include **Better Collections, Billing and Insurance Methods,** and **Reception and Patient Flow Techniques.** Faculty: Conamikes Assaciates, Inc., Marina del Rey, CA. Registration fee far each half-day workshop: TMA member, $75; nan-member, $100.

The fallowing county medical sacieties are participating as co-sponsors in the 1987 TMA practice management warkshaps and seminars:

Bexar County Medical Center
El Paso County Medical Society
Potter-Randall County Medical Society
Tarrant County Medical Society
Taylor-Jones-Haskell County Medical Society
Travis County Medical Society

Marketing Techniques for a Successful Practice is a one-day workshap that addresses the marketing needs in taday's medical practice environment. Tested ideas, from years of cansulting and research with the widest variety of physicians, are presented. Faculty: Conomikes Assaciates, Inc., Marina del Rey, CA. Registratian fee: TMA member, $155; non-member, $175.

How to Run a More Profitable Practice is currently being developed for presentation in the fall of 1987. The one-day workshop will address maximizing revenues, controlling overhead costs, and "putting it tagether" to run a more efficient and mare profitable practice. Faculty: Conamikes Associates, Inc., Marina del Rey, CA. Watch for a special brochure announcing this workshop series ta be mailed in late summer of 1987.

Personal Income and Estate Tax Planning is a two-day seminar for physicians and spouses to help them understand the fundamentals of tax planning and why prudent planning and management are sa impartant. Faculty: Robert Jorrie, Jarrie, Archer, and Standley, Inc., San Antonio. Registration fee: TMA member, $220; non-member, $270. (There is no additianal cost far spouse if physician attends.)

Increasing Your Net Worth Through Financial, Pension, and Investment Planning is a one-day seminar designed to acquaint physicians with techniques available under current law ta establish the most effective business structure for their medical practice in order ta minimize federal income tax liability, increase net worth, and create additional funds for practice develapment and growth. Faculty: Glazer, Suellentrop, and Associates, Inc., Dallas. Registratian fee: TMA member, $170; non-member, $210. (There is no additianal cost for spouse if physician attends.)

Gearing Up for Retirement is a one and one-half day seminar designed to assist physicians and their spouses in planning for a successful retirement. Seminar topics include closing a medical practice, legal and tax consideratians, and maximizing retirement incame. Registration fee: TMA member, $210; non-member, $250. (There is no additional cost far spouse if physician attends.)

Other Workshops and Seminars may be developed and offered by TMA during 1987. Each warkshap and seminar series will be preceded by a special brochure announcing the program and schedule of offerings.

1987 Workshop Schedule By Series

Workshop Series	Date	City
How to Get Started in Medical Practice (Conomikes Associates, Inc.)	Fall 1987— dates to be announced	Amarillo Dallas El Paso Fort Worth Galveston Houston Lubbock San Antonio Temple
Insurance Claims Preparation, Coding and Documentation (Morning) Harold Whittington & Associates) **How to Improve Your Third-Party Reimbursement** (Afternoon) (Harold Whittington & Associates)	February 24 Feburary 25 February 27 March 10 March 11 March 13 March 24 March 25 April 1 April 7 April 8 April 10 September 16 September 18 September 29 September 30 October 2 October 13 October 14 October 16	San Antonio Corpus Christi Harlingen Amarillo Dallas Wichita Falls Beaumont Houston Tyler Austin Fort Worth Abilene San Antonio El Paso Lubbock Midland Dallas Waco Fort Worth Houston
Medical Office Management Institute (MOMI) (Conomikes Associates, Inc.	August 3–7 August 24–28	San Antonio Dallas
Practice Management Series (Conomikes Associates, Inc.)	June 2 June 3 June 4 June 23 June 24 June 25	Dallas Austin Houston San Antonio Galveston Fort Worth
Marketing Techniques for a Successful Practice (Conomikes Associates, Inc.)	January 20 January 21 January 22 February 17 February 18 February 19	Fort Worth San Antonio Houston Austin Lubbock Dallas
How to Run a More Profitable Practice (Conomikes Associates, Inc.)	October 6 October 7 October 8 November 4 November 5	Houston San Antonio Austin Amarillo Dallas
Personal Income and Estate Tax Planning (Robert Jorrie)	March 21–22 November 7–8	San Antonio Dallas
Increasing Your Net Worth (Glazer, Suellentrop, and Associates)	January 17 February 21 September 12 October 10	Houston Dallas San Antonio Austin
Gearing Up for Retirement	April 3–5 October 23–25	San Antonio Houston

Over 84% of Warm Springs patients return home.

Rehabilitation of the physically disabled is our *only* specialty.

Warm Springs Rehabilitation Hospital treats patients who have suffered disabling strokes, crippling accidents from head injuries or damage to the spinal cord, as well as those disabled with birth defects.

And we're very good at what we do because rehabilitation is all we do. For example, over 81% of our stroke patients returned home; over 86% of our quadriplegics returned home; and over 91% of our paraplegics returned home.

This remarkable success rate is because we specialize. Our doctors are rehabilitation specialists. Our therapists in the physical, occupational and recreational areas are highly trained and experienced professionals. As are those in speech and hearing, psychology, orthotics and nursing.

And we are not new to the rehabilitation field. We have over 40 years of experience and success behind us. If you'd like the best for your patients, contact Dr. Larry Browne at Warm Springs Rehabilitation Hospital. Better yet, call him toll-free 1-800-292-1440.

WARM SPRINGS REHABILITATION HOSPITAL

P.O. Box 58 • Gonzales, Texas 78629
Toll-Free in Texas 1-800-792-WARM

FORECAST·87

READING MEDICINE'S FUTURE

Order Cassette Tapes Today!

Texas Medical Association 1987 Winter Conference

Tape 1
Representing the Physicians of Texas—Jim Bob Brame, MD
Medical Issues of the Day: Positive Approaches in Facing the Challenge—William S. Hotchkiss, MD
Old Attitudes, New Realities—James H. Sammons, MD

Tape 2
Dimensions of Increasing Competition: Lessons for the Future—Robert D. Burnett, MD
Physicians' Fees and Reimbursement: Current Explorations and Future Trends—Ronald E. Henderson, MD

Tape 3
Panel: Tort, Court, and Insurance Reform—The 1987 Legislature's View of the Liability Crisis
Representative Mike Toomey
Judge Robert W. Calvert
Senator Chet Edwards
David Vanderpool, MD

Tape 4
Breakout Session 1—Physician Fees and Reimbursement Changes by Medicare
Harold Whittington
Ronald E. Henderson, MD
Grover L. Bynum, Jr., MD

Tape 5
Breakout Session 2—Maintaining Professional Standards—A Look at Peer Review and Medical Discipline in Texas
Bill Campbell, JD
Robert M. Tenery, Jr., MD
Charles W. Bailey, MD, JD
Helene A. Alt, JD
Marshall K. Dougherty, MD

Tape 6
Breakout Session 3—A Medical Legislative Prognosis for the 1987 Session
Bernard W. Palmer, MD
Larry J. Hines, MD
Peter V. Weston, MD
Alan C. Baum, MD
William G. Gamel, MD

Special Pre-Conference Marketing Workshop/Friday, February 6
Two-tape special "Marketing Tips for a Successful Practice"
Jeffrey J. Denning, Conomikes Associates, Inc.—$14.95, plus 7¼% state sales tax.

Forecast 87, Reading Medicine's Future 1987 Winter Conference Tape Order Form

Individual audio cassette tapes are $7.95 each, plus 7¼% state sales tax.

☐ Tape 1 ☐ Tape 2 ☐ Tape 3 ☐ Tape 4 ☐ Tape 5 ☐ Tape 6

_____ Marketing Workshop Tapes ($14.95, plus 7¼%)

Cost _____
Sales tax _____
Total _____

☐ Paid ☐ Bill ☐ Mail ☐ Delivered

Name _____

Address _____

City _____

Zip _____

For additional information, contact TMA Communication Department, 1801 North Lamar Blvd., Austin, Texas 78701; 512/477-6704.

Texas Medical Association 120th Annual Session May 13–17, 1987 Houston

Houston— A Great Place To Be In May '87

Youthful, luxurious and probably habit forming—Houston—site of the 120th Annual Session offers excitement, hospitality, charm. When Texas Medical Association and Auxiliary members convene May 13–17 they will enjoy the city's famous Southern hospitality, cosmopolitan sophistication and cultural evolution.

A supercity—vast, varied, vital—Houston awes the world with its boundless energy, vibrant commerce, and its emergence into unchartered fields such as space, science, oceanography, medical research.

Take time to view the cityscapes—natural and manmade; visit the sports arenas—Astrodome and Summit; shop the Olympian malls. Experience the culture and the arts. Enjoy fine dining with a pinnacle view or regional fare in a hide-away. Marvel at the renowned Texas Medical Center, one of the three major complexes in the nation. Consisting of 29 colleges, schools, institutes and hospitals, the Center attracts students, scientists, patients from around the world.

Convention Facilities— Beyond Your Expectations

The annual meeting will be held in downtown Houston. The area has much to offer. The architecture will stun you—exciting, bold, futuristic. The superstructures stand as proud symbols of progress which has catapulted the city into the nation's fourth largest city.

The giant imposing structures—actually cities within cities—provide efficiency, quality, beauty to resident and visitor. The Albert Thomas Convention and Exhibit Center, part of the Houston Civic Center and the focal point for all meetings and exhibits for the TMA Session, offers superb exhibit space and meeting accommodations. The surrounding hotels where members and guests will be housed are outstanding. The Hyatt Regency, a contemporary architectural wonder, features a 30-floor open atrium and park-like lobby. Doubletree Hotel, elegantly French, offers deluxe rooms and suites overlooking Sam Houston Park. The hotel is connected to the downtown tunnel system which leads to major businesses, shops and restaurants. Auxiliary headquarters, Four Seasons Hotel, is eloquently contemporary—rich woods, handwoven oriental tapestries. A relaxed and comfortable atmosphere. The Whitehall Hotel has elegant public rooms filled with fine antiques. Holiday Inn—Downtown Houston, one of the world's largest, is convenient to other hotels and the Convention Center.

Scientific Sessions, House of Delegates and Exhibits—Albert Thomas Convention and Exhibit Center

Business Sessions (Boards, Councils, Committees, Delegates' Housing)—Hyatt Regency Houston

Auxiliary Headquarters—Four Seasons Hotel

General Housing/Meetings—Doubletree Hotel at Allen Center

General Housing/Meetings—The Whitehall

General Housing—Holiday Inn Houston—Downtown

Features

Exhibits—Scientific, Technical

Section Programs—Some 500 scientific presentations in Allergy, Asthma, and Clinical Immunology—Colon and Rectal Surgery—Digestive Diseases—Diseases of the Chest—Endocrinology—Family Practice—Internal Medicine—Neurological Surgery—Neurology—Nuclear Medicine—Obstetrics and Gynecology—Occupational Medicine—Oncology—Ophthalmology—Otolaryngology—Pathology—Pediatrics—Physical Medicine and Rehabilitation—Plastic, Reconstructive, and Maxillofacial Surgery—Psychiatry—Public Health—Radiology—Surgery—Urology.

Specialty Society Programs—In addition to numerous topics of general interest, you will have an opportunity for an update on your own particular specialty.

Sunrise Sessions—Informal presentations by guest speakers on topics of interest to all specialists. Have coffee with one of the professors from 8:15 to 9:15 am on Thursday, Friday and Saturday and join the discussions.

Sports/Alumni Events—Golf and Tennis Tournaments; Fun Run; Alumni Parties; Class Reunions.

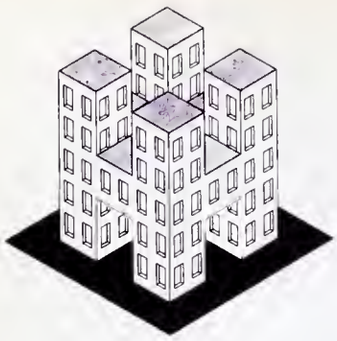
Auxiliary Program

The theme for the 1987 convention of the TMA Auxiliary will be "From This Moment On" in keeping with the progressive theme for the 1986–1987 year.

The convention will open with a gala champagne welcome reception honoring county presidents Wednesday, May 13. All business sessions will be held Thursday morning, May 14, including recognition of 1986–1987 award winners. The Thursday luncheon speaker will be Ninfa, Houston's highly successful entrepreneur and owner of the chain of Ninfa's Restaurants.

The 1987–1988 board will meet Friday, May 15, and the installation of officers will take place during the luncheon which will feature an outstanding speaker.

A wide array of special optional events has been planned for auxiliary members



during the 1987 convention. Among them will be a tour of River Oaks homes, a financial planning seminar by Dean Kanaly, a demonstration of the Four Seasons' "light cuisine" by the hotel's chef and a series of "Dine-Around" dinners offered for Thursday evening.

For additional information, contact TMA Auxiliary, 1801 North Lamar Blvd., Austin 78701, 512/477-6704.

Registration

There is no registration fee for members of the Texas Medical Association, for speakers and exhibitors in the annual session program, and for nonmembers such as officially-invited guests of the Association.

Registration fees are charged for some nonmember categories, and these are mentioned in the nonmember categories listed below:

Nonmember Registration Fees

a. Physicians	**$100**
b. Allied Health Disciplines—Nurses, Technicians, Medical Assistants	**$10**
c. In-Training—Interns, Residents, Fellows	**$10**
d. Students	**$10**
e. Prospective Exhibitors and Approved Visitors	**$50**
f. Spouses of Nonmember Physicians	**$10**

One Location for Registration for Session

(See hours indicated):

Albert Thomas Convention and Exhibit Center
East Hall, Smith Street Entrance

Wednesday, May 13, 9 am–5:30 pm
Thursday, May 14, 7 am–5:30 pm
Friday, May 15, 7 am–5:30 pm
Saturday, May 16, 7 am–3:30 pm

You may register in advance of the session by completing the Advance Registration Form printed here. Pick up badge and registration materials during above hours.

Guest Speakers

H. Whitney Boggs, Jr., MD
Shreveport, La
colon and rectal surgery

Robert Coles, MD
Cambridge, Mass
child psychiatry

John S. Collis, MD
Cleveland, Ohio
neurolagical surgery

Reginald R. Cooper, MD
Iowa City, Iowa
orthopaedic surgery

John J. Coury, Jr., MD
Port Huron, Mich
surgery;
President, American Medical Association

Dale Daniel, MD
San Diego, Calif
orthapaedic surgery

Scott F. Davies, MD
Minneapolis, Minn
internal medicine (pulmanary diseases)

Charles A. Fager, MD
Burlington, Mass
neuralogical surgery

David N. F. Fairbanks, MD
Washington, DC
otolaryngology

Robert G. Feldman, MD
Bastan, Mass
neuralagy and pharmacalogy

Ian B. Fries, MD
Brick, NJ
orthopaedic surgery;
President, National Flying Physicians Association

Rudolph P. Galask, MD
Iawa City, Iawa
obstetrics and gynecalogy

M. Eric Gershwin, MD
Davis, Calif
rheumatology/allergy/immunolagy

Jerome C. Goldstein, MD
Washington, DC
otolaryngalogy

Stanley A. Herring, MD
Kirkland, Wash
physical medicine and rehabilitation

Joseph Jankovic, MD
Hauston, Tex
neurolagy

Ralph E. Kauffman, MD
Detroit, Mich
pediatrics and pharmacalogy

David W. Kennedy, MD
Baltimore, Md
otolaryngology

Ira J. Kodner, MD
St. Louis, Mo
colon and rectal surgery

Steven M. Larson, MD
Bethesda, Md
nuclear medicine

Pia Mellody, RN
Wickenburg, Ariz
alcoholism and chemical dependency counseling

Dean D. Metcalfe, MD
Bethesda, Md
allergy and immunology

Stephen H. Miller, MD
Portland, Ore
plastic and reconstructive surgery

Byron A. Myhre, MD, PhD
Torrance, Calif
pathology

Richard M. Narkewicz, MD
South Burlington, Vt
pediatrics

Harold S. Nelson, MD
Denver, Cola
allergy and immunalagy

Eric Pfeiffer, MD
Tampa, Fla
geriatric psychiatry

Peter Randall, MD
Philadelphia, Pa
plastic surgery

Robert C. Reeder, MD
Memphis, Tenn
plastic and recanstructive surgery

Ensor Rodriguez-Lopez, MD, PhD
Los Angeles, Calif
occupational medicine

J. James Rowsey, MD
Oklahoma City, Okla
aphthalmology

Julio V. Santiago, MD
St. Louis, Ma
pediatrics; endacrinalogy and metabolism

Herbert H. Schaumburg, MD
Bronx, NY
neurology

Rhea Seddon, MD
Hauston, Tex
astronaut, aerospace medicine and emergency medicine

Edward A. Sickles, MD
San Francisco, Calif
radiology

J. Graham Smith, Jr., MD
Augusta, Ga
dermatology

Volker K. H. Sonntag, MD
Phoenix, Ariz
neurological surgery

Theodore H. Stanley, MD
Salt Lake City, Utah
anesthesiology

Theodore I. Steinman, MD
Boston, Mass
nephrology

Lenore C. Terr, MD
San Francisco, Calif
psychiatry

David H. Thornberry
Austin, Tex
Member, State Board of Insurance

Henry J. L. Van Dyk, MD
New Orleans, La
ophthalmology and neurology

Joseph Westermeyer, MD, PhD
Minneapolis, Minn
psychiatry

he Four Freshmen—otal Entertainment

e fabulous Four Freshmen—singers, usicians, entertainers—will dazzle xas Medical Association and Auxiliary embers with their versatility Friday ening, May 15, during the 1987 Anal Session. Featured attraction for the ssociation/Auxiliary party, America's umber One Vocal and Instrumental uartet will give a stirring performance iday in the beautiful Imperial Ballom, Hyatt Regency Hotel. The Bongles Band, a popular Houston dance chestra, will provide a "don't miss" ening. The party begins at 8 pm and over at 1 am. There will be light hors oeuvres and a cash bar for cocktails. y proceeds will be donated to the xiliary Student Loan Fund.

Bojongles Bond Members

The "instrumental" quality which identifies the Freshmen Sound was brought to focus by their inventive concept of using their voices as musical instruments. Combined with their knowledge of harmony, the effect of a modern orchestral ensemble is created. Highly versatile, the Frosh trade around and play with professional skill seven instruments. Their albums, The Four Freshmen and Five Trombones, The Four Freshmen and Five Saxes, etc. are collector's items.

Fresh, different, appealing, the group is as popular in the 1980s as when they began singing as college freshmen in the 1950s and were "discovered" by Stan Kenton. "Day by Day," "Graduation Day," "How Can I Tell Her," and "It's a Blue World" will stir some good memories. Bob Flanigan, the leader and original member of the group, enthralls audiences with his outstanding trombone playing and wry humor. Saxophonist Audie Goodman sings second part and came to fame with the legendary Modernaires band. Mike Beisner sings third and plays a mean trumpet, while Rod Henley sings fourth vocal part and plays a variety of instruments including keyboards, trumpet and trombone.

Get a group together and plan a memorable evening with the Four Freshmen. The fun begins at 8 pm, Friday, May 15. Tickets are $25 per person and should be ordered in advance of the Session by completing the form here.

eneral Meeting uncheon Speakers xamine the Future

e President of the American Medical ssociation, John J. Coury, Jr., MD, will plore "Challenges of American Medie" in his Friday, May 15, General eeting Luncheon address in the Albert omas Convention Center. Dr. Coury, a eneral and pediatric surgeon from Port uron, has spent his tenure as President siting with colleagues over the nation garding the future of medicine and the dividual physician. He has served in merous capacities with American edical Association and Michigan State edical Society. He is currently Chairan of the Council of the World Medical ssociation.

Dr. Rheo Seddon

Physician-Astronaut, Rhea Seddon, MD, will share her experience in space and provide information on NASA's future activities Saturday, May 16, at the General Meeting Luncheon. Dr. Seddon made her first trip beyond earth's boundaries as Mission Specialist in April 1985. She was responsible for deployment of the Leasat Satellite, Remote Manipulator System operations and the American Flight Echocardiograph Experiment.

Dr. Seddon received her MD degree from the University of Tennessee College of Medicine in 1973. Between the period of her internship and residency, she served as an emergency room physician in Mississippi and Tennessee hospitals, and now serves in this capacity in the Houston area in her spare time. Dr. Seddon also has done research into the effects of radiation therapy on nutrition in cancer patients. Married to Astronaut Robert L. Gibson, they have a four-year-old son.

Both luncheons are scheduled in Room 201, Albert Thomas Convention Center, 12:15–2 pm. Purchase tickets ($20 per person) in advance by completing the form here.

1987 Annual Session Advance Registration Form (please print)

name

address

city state zip

specialty

Members, please check all applicable spaces below:

- ☐ Physician
- ☐ Intern/Resident/Fellow
- ☐ Medical Student
- ☐ TMA Officer
- ☐ TMA Trustee
- ☐ TMA Delegate
- ☐ TMA Alternate Delegate
- ☐ TMA Councilor
- ☐ TMA Vice Councilor
- ☐ TMA Council/Committee
- ☐ **AMA Member**
- ☐ AMA Delegate
- ☐ AMA Alternate Delegate
- ☐ CMS President
- ☐ 50 Year Club
- ☐ Hospital Medical Staff Section Representative
- ☐ TEXPAC
- ☐ TEXPAC 300 Club
- ☐ MSS Executive Council
- ☐ MSS Chapter Officer
- ☐ MSS Chairman
- ☐ RPS Chairman
- ☐ RPS Councilor
- ☐ RPS Executive Council
- ☐ Speaker
- ☐ Scientific Exhibitor
- ☐ **Satisfying state level meeting requirement**

Nonmember	Fee
☐ **Speakers, Exhibitors**	waived
☐ **TMA and County Medical Society Staff and Family**	waived
☐ **Physicians**	$100
☐ **Interns, Residents, Fellows**	$10
☐ **Medical Students**	$10
☐ **Allied Health Personnel**	$10
☐ **Prospective Exhibitors, Approved Visitors**	$50
Nonmember's Family	
☐ Family of Nonmembers	$10
☐ Children (21 and under)	waived

Please mail check and registration form to: Texas Medical Association Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Advance Ticket Reservation Form

name

address

city state zip

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Complete the advance ticket reservation order form, return it to TMA with your check. Pick up tickets at the registration area. Note ticket sales location and hours.

Number of Tickets	Function and Price inclusive of tax and gratuity	Amount
_____	**The Four Freshmen BoJangles Band** Friday, May 15, 8 pm–1 am $25 per person	_____
_____	**General Meeting Luncheon John J. Coury, Jr., MD** Friday, May 15, 12:15–2 pm $20 per person	_____
_____	**General Meeting Luncheon Astronaut Rhea Seddon, MD** Saturday, May 16, 12:15–2 pm $20 per person	_____
	TOTAL	**$**_____

Advance registration forms and ticket money must be received by **April 7. No refunds after April 29.**

Please complete and return before April 7 to: Texas Medical Association, Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Final Program Order Form

The Program and Abstracts of the 120th Texas Medical Association Annual Session will be available in early April. If you wish to order your copy in advance, please return this form with a check for $5.00 to Texas Medical Association, Business Office, 1801 North Lamar Blvd., Austin, Texas 78701.

Please send a copy of the Program and Abstracts for the 120th Annual Session to:

name

address

city state zip

My check for $5.00 is enclosed.

lake Your eservations Now

Requests will be processed first-come, first-served by the Housing Bureau, Greater Houston Convention & Visitors Council through its computerized system.

Complete ***in full*** the ***Official Housing Request Form*** and return it immediately to:

Texas Medical Association Housing Bureau
3300 Main
Houston, Texas 77002-9396

Do not send housing form to Texas Medical Association. This will only delay your request.

Only reservations received on the ***Official Housing Request Form*** will be accepted. Hotels will not accept reservations directly, and telephone requests cannot be accepted.

List ***three*** hotels in order of preference.

Deadline for reservations is April 29.

nfirmations

Room confirmation will be sent to you ***directly*** from the hotel within three weeks of receipt of your request by the Housing Bureau. Please check it carefully to be sure all information is correct.

om Deposits

Do not send any room deposit with Housing Form. Should a deposit be required, the hotel will request it.

Reservations will be held until 6 pm of the arrival date unless a later arrival time is indicated. If a deposit is required to hold your room past 6 pm, you will be notified at the time of confirmation by hotel. The deposit should be mailed directly to the hotel.

anges and Cancellations

Any changes in room reservations, arrival or departure dates should be sent in writing directly to the hotel.

All cancellations should be sent to the Housing Bureau immediately so that others can be accommodated. Your notice of cancellation must be received within 48 hours of your scheduled arrival or your deposit cannot be refunded. ***DON'T BE A NO SHOW!***

uttle Service

Shuttle service will be provided between hotels and Convention Center.

Participating hotels and codes:

Deadlines for Reservations—April 29

1. **Four Seasons Hotel* (FSDT)**
   1300 Lamar Street
   (Auxiliary Headquarters; General Housing)

   Singles $75
   Doubles $85

2. **Holiday Inn Houston—Downtown (HID)**
   801 Calhoun Street
   (General Housing)

   Singles/Doubles $58

3. **Doubletree Hotel* (DBH)**
   at Allen Center
   400 Dallas Street
   (Housing for Program Participants)

   Singles/Doubles $75

4. **Hyatt Regency Houston* (HR)**
   1200 Louisiana Street
   (Delegates' Housing; Board, Council, Committee Meetings)

   Singles $83
   Doubles $85

5. **The Whitehall (WHIT)**
   1700 Smith Street
   (General Housing)

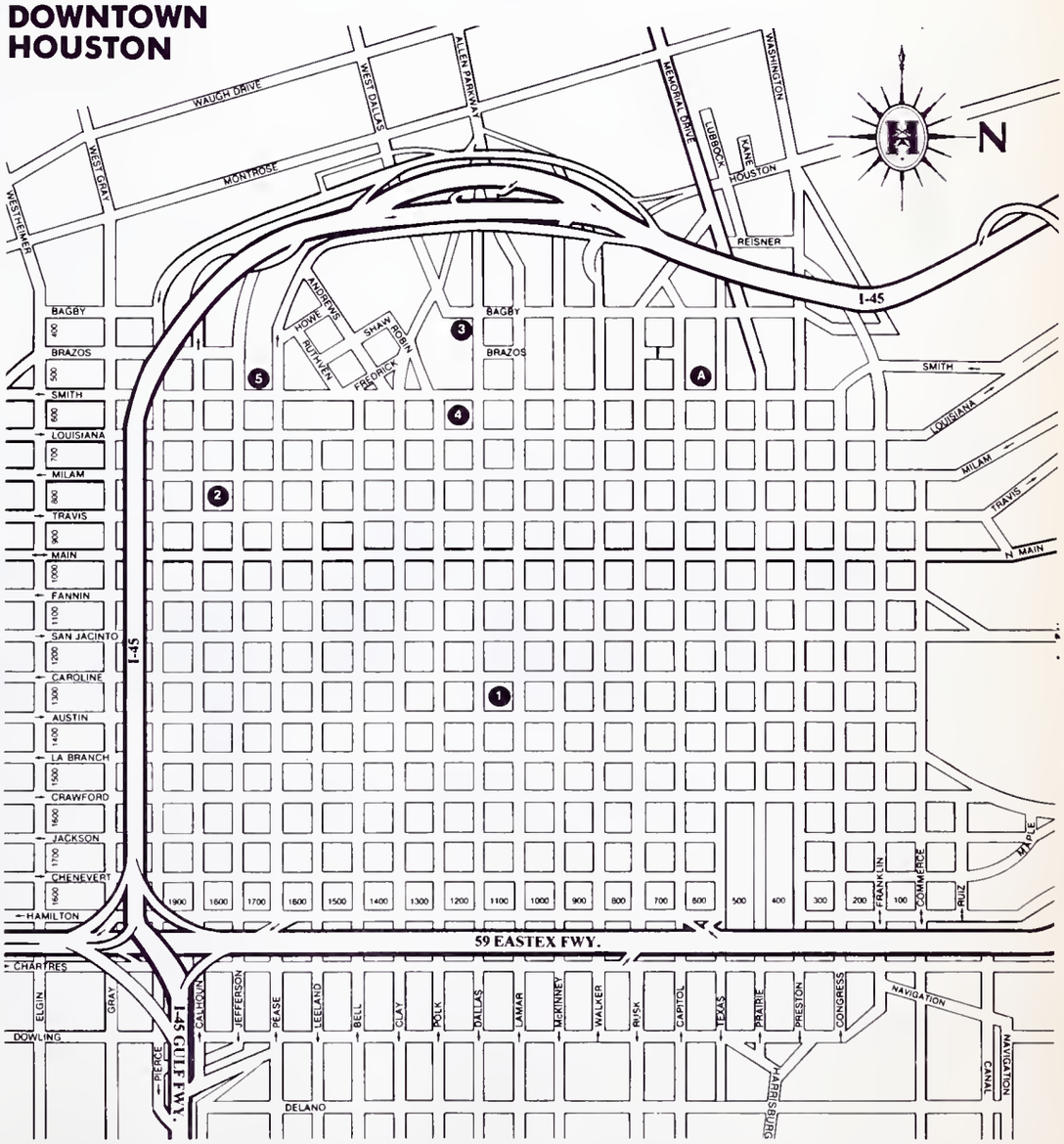
   Singles/Doubles $65

A **Albert Thomas Convention and Exhibit Center**
   612 Smith Street
   (Scientific Sessions, House of Delegates Meetings, Exhibits)

The above room rates do not include 11% occupancy tax and daily parking fees.

*Headquarters Hotels

DOWNTOWN HOUSTON



FOR HOUSING BUREAU USE ONLY

Texas Medical Association
120th Annual Session
May 13–17, 1987
Houston

MAIL TO:

TEXAS MEDICAL ASSN.
HOUSING BUREAU
3300 MAIN
HOUSTON, TX 77002-9396

OFFICIAL HOUSING REQUEST FORM

• PLEASE READ CAREFULLY •

_ PLEASE **PRINT** OR **TYPE** ALL ITEMS TO ASSURE ACCURACY.
_ COMPLETE EACH PART BELOW IN DETAIL FOR CORRECT AND RAPID COMPUTER PROCESSING.
_ SHOULD MORE THAN **TWO (2)** ROOMS BE NEEDED, FORM MAY BE DUPLICATED, OR SUPPLEMENTAL ROOM LIST **MUST** BE ATTACHED USING SAME FORMAT AS IN PART III.
_ **ALL** CONFIRMATIONS WILL BE SENT TO INDIVIDUAL INDICATED IN PART I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

NAME OF PERSON REQUESTING ROOMS

(FIRST NAME) (LAST)

(NAME OF CLINIC, GROUP, OR COMPANY)

(STREET ADDRESS OR P.O. BOX NUMBER)

(CITY) (STATE) (ZIP)

(COUNTRY) (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: Select **THREE** Hotel/Motels of your choice. No request will be processed without **THREE** choices.

FIRST CHOICE (HOTEL CODE) SECOND CHOICE (HOTEL CODE) THIRD CHOICE (HOTEL CODE)

PART III

INSTRUCTIONS:
1. **PRINT** OR **TYPE** NAMES OF **ALL** PERSONS OCCUPYING EACH ROOM.
2. SELECT TYPE ROOM DESIRED WITH ARRIVAL AND DEPARTURE DATES.
3. SUPPLEMENTAL LIST FOR ADDITIONAL ROOM **MUST** USE SAME FORMAT.
4. PRINT OR TYPE LAST NAME FIRST.

	OCCUPANTS NAMES (PRINT LAST NAME FIRST)	P + 1—Parlor & one bedroom	P + 2—Parlor & two bedrooms
ROOM NO. 1	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.
ROOM NO. 2	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.

FOR USE OF ASSN. ONLY

NOTE: PLEASE RECHECK ALL ITEMS FOR CORRECT INFORMATION

Mean,

Powerful against susceptible pathogens.*

lean &

Easy on tight budgets.

clean.

Gentle to patients (generally well tolerated).

The one antimicrobial that belongs on every formulary.

Once-a-day

Rocephin® ROCHE IV·IM

ceftriaxone sodium/Roche

* ROCEPHIN is indicated in the following infections: bacterial septicemia, bone and joint, intra-abdominal, lower respiratory tract, skin and skin structure, urinary tract, bacterial meningitis and gonorrhea. Please see summary of product information on adjacent page for indicated susceptible organisms.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

Please see adjacent page for summary of product information.

Rocephin® IV·IM ROCHE®
ceftriaxone sodium/Roche

Before prescribing, please consult complete product information, a summary of which follows:

MICROBIOLOGY The bactericidal activity of ceftriaxone results from inhibition of cell wall synthesis. Ceftriaxone has a high degree of stability in the presence of beta-lactamases, both penicillinases and cephalosporinases, of gram-negative and gram-positive bacteria. Ceftriaxone is usually active against the following microorganisms *in vitro* and in clinical infections (see Indications and Usage):

GRAM-NEGATIVE AEROBES: *Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae* (including ampicillin-resistant strains), *H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *Neisseria gonorrhoeae* (including penicillinase and nonpenicillinase producing strains), *Neisseria meningitidis, Proteus mirabilis, Proteus vulgaris, Morganella morganii* and *Serratia marcescens*.

Note: Many strains of the above organisms that are multiply resistant to other antibiotics, e.g., penicillins, cephalosporins and aminoglycosides, are susceptible to ceftriaxone sodium.

Ceftriaxone is also active against many strains of *Pseudomonas aeruginosa*.

GRAM POSITIVE AEROBES: *Staphylococcus aureus* (including penicillinase-producing strains) and *Staphylococcus epidermidis* (Note: methicillin-resistant staphylococci are resistant to cephalosporins, including ceftriaxone), *Streptococcus pyogenes* (Group A beta-hemolytic streptococci), *Streptococcus agalactiae* (Group B streptococci) and *Streptococcus pneumoniae* (Note: Most strains of enterococci, *Streptococcus faecalis* and Group D streptococci are resistant.)

Ceftriaxone also demonstrates *in vitro* activity against the following microorganisms, although the clinical significance is unknown:

GRAM NEGATIVE AEROBES: *Citrobacter freundii, Citrobacter diversus, Providencia* species (including *Providencia rettgeri*), *Salmonella* species (including *S typhi*), *Shigella* species and *Acinetobacter calcoaceticus*.

ANAEROBES: *Bacteroides* species, *Clostridium* species (Note: most strains of C *difficile* are resistant).

SUSCEPTIBILITY TESTING: Standard susceptibility disk method. Quantitative methods that require measurement of zone diameters give the most precise estimate of antibiotic susceptibility. One such procedure (Bauer AW, Kirby WMM, Sherris JC, Turck M: Antibiotic Susceptibility Testing by a Standardized Single Disk Method, *Am J Clin Pathol* 45: 493-496, 1966, Standardized Disk Susceptibility Test, *Federal Register* 39: 19182-19184, 1974, National Committee for Clinical Laboratory Standards, Approved Standard: ASM 2, Performance Standards for Antimicrobial Disk Susceptibility Tests, July 1975.) has been recommended for use with disks to test susceptibility to ceftriaxone.

Laboratory results of the standardized single-disk susceptibility test using a 30-mcg ceftriaxone disk should be interpreted according to the following three criteria:

1. Susceptible organisms produce zones of 18 mm or greater, indicating that the tested organism is likely to respond to therapy.
2. Organisms that produce zones of 14 to 17 mm are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained.
3. Resistant organisms produce zones of 13 mm or less, indicating that other therapy should be selected.

Organisms should be tested with the ceftriaxone disk, since ceftriaxone has been shown by *in vitro* tests to be active against certain strains found resistant to cephalosporin class disks.

Organisms having zones of less than 18 mm around the cephalothin disk are not necessarily of intermediate susceptibility or resistant to ceftriaxone.

Standardized procedures require use of control organisms. The 30-mcg ceftriaxone disk should give zone diameters between 29 and 35 mm, 22 and 28 mm and 17 and 23 mm for the reference strains *E coli* ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853, respectively.

DILUTION TECHNIQUES: Based on the pharmacokinetic profile of ceftriaxone, a bacterial isolate may be considered susceptible if the MIC value for ceftriaxone is not more than 16 mcg/ml. Organisms are considered resistant to ceftriaxone if the MIC is equal to or greater than 64 mcg/ml. Organisms having an MIC value of less than 64 mcg/ml, but greater than 16 mcg/ml, are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained.

E coli ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853 are also the recommended reference strains for controlling ceftriaxone dilution tests. Greater than 95% of MICs for the *E coli* strain should fall within the range of 0.016 to 0.5 mcg/ml. The range for the *S aureus* strain should be 1 to 2 mcg/ml, while for the *P aeruginosa* strain the range should be 8 to 64 mcg/ml.

INDICATIONS AND USAGE: Rocephin is indicated for the treatment of the following infections when caused by susceptible organisms:

LOWER RESPIRATORY TRACT INFECTIONS caused by *Strep pneumoniae, Streptococcus* species (excluding enterococci), *Staph aureus, H influenzae, H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *E coli, E aerogenes, Proteus mirabilis* and *Serratia marcescens*.

SKIN AND SKIN STRUCTURE INFECTIONS caused by *Staph aureus, Staph epidermidis, Streptococcus* species (excluding enterococci), *E cloacae, Klebsiella* species (including *K pneumoniae*), *Proteus mirabilis* and *Pseudomonas aeruginosa*.

URINARY TRACT INFECTIONS (complicated and uncomplicated) caused by *E coli, Proteus mirabilis, Proteus vulgaris, M morganii* and *Klebsiella* species (including *K pneumoniae*).

UNCOMPLICATED GONORRHEA (cervical/urethral and rectal) caused by *Neisseria gonorrhoeae*, including both penicillinase and nonpenicillinase-producing strains.

PELVIC INFLAMMATORY DISEASE caused by *N gonorrhoeae*.

BACTERIAL SEPTICEMIA caused by *Staph aureus, Strep pneumoniae, E coli, H influenzae* and *K pneumoniae*.

BONE AND JOINT INFECTIONS caused by *Staph aureus, Strep pneumoniae, Streptococcus* species (exclfuding enterococci), *E coli, P mirabilis, K pneumoniae* and *Enterobacter* species.

INTRA-ABDOMINAL INFECTIONS caused by *E coli* and *K pneumoniae*.

MENINGITIS caused by *H influenzae, N meningitidis* and *Strep pneumoniae*. Ceftriaxone has also been used successfully in a limited number of cases of meningitis and shunt infections caused by *Staph epidermidis* and *E coli*.

PROPHYLAXIS: The administration of a single dose of ceftriaxone preoperatively may reduce the incidence of postoperative infections in patients undergoing coronary artery bypass surgery.

Although ceftriaxone has been shown to have been as effective as cefazolin in the prevention of infection following coronary artery bypass surgery, no placebo-controlled trials have been conducted to evaluate any cephalosporin antibiotic in the prevention of infection following coronary artery bypass surgery.

SUSCEPTIBILITY TESTING: Before instituting treatment with Rocephin, appropriate specimens should be obtained for isolation of the causative organism and for determination of its susceptibility to the drug. Therapy may be instituted prior to obtaining results of susceptibility testing.

CONTRAINDICATIONS: Rocephin is contraindicated in patients with known allergy to the cephalosporin class of antibiotics.

WARNINGS: BEFORE THERAPY WITH ROCEPHIN IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE TO DETERMINE WHETHER THE PATIENT HAS HAD PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS, PENICILLINS OR OTHER DRUGS. THIS PRODUCT SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. ANTIBIOTICS SHOULD BE ADMINISTERED WITH CAUTION TO ANY PATIENT WHO HAS DEMONSTRATED SOME FORM OF ALLERGY, PARTICULARLY TO DRUGS. SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE THE USE OF SUBCUTANEOUS EPINEPHRINE AND OTHER EMERGENCY MEASURES.

Pseudomembranous colitis has been reported with the use of cephalosporins (and other broad-spectrum antibiotics), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with antibiotic use.

ROCEPHIN® (ceftriaxone sodium/Roche)

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis. Cholestyramine and colestipol resins have been shown to bind to the toxin *in vitro*.

Mild cases of colitis respond to drug discontinuance alone. Moderate to severe cases should be managed with fluid, electrolyte and protein supplementation as indicated.

When the colitis is not relieved by drug discontinuance or when it is severe, oral vancomycin is the treatment of choice for antibiotic-associated pseudomembranous colitis produced by C *difficile*. Other causes of colitis should also be considered.

PRECAUTIONS: *GENERAL*: Although transient elevations of BUN and serum creatinine have been observed, at the recommended dosages, the nephrotoxic potential of Rocephin is similar to that of other cephalosporins.

Ceftriaxone is excreted via both biliary and renal excretion (see Clinical Pharmacology). Therefore, patients with renal failure normally require no adjustment in dosage when usual doses of Rocephin are administered, but concentrations of drug in the serum should be monitored periodically if evidence of accumulation exists, dosage should be decreased accordingly.

Dosage adjustments should not be necessary in patients with hepatic dysfunction, however, in patients with both hepatic dysfunction and significant renal disease, Rocephin dosage should not exceed 2 gm daily without close monitoring of serum concentrations.

Alterations in prothrombin times have occurred rarely in patients treated with Rocephin. Patients with impaired vitamin K synthesis or low vitamin K stores (e.g., chronic hepatic disease and malnutrition) may require monitoring of prothrombin time during Rocephin treatment. Vitamin K administration (10 mg weekly) may be necessary if the prothrombin time is prolonged before or during therapy.

Prolonged use of Rocephin may result in overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Rocephin should be prescribed with caution in individuals with a history of gastrointestinal disease, especially colitis.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Carcinogenesis: Considering the maximum duration of treatment and the class of the compound, carcinogenicity studies with ceftriaxone in animals have not been performed. The maximum duration of animal toxicity studies was six months.

Mutagenesis: Genetic toxicology tests included the Ames test, a micronucleus test and a test for chromosomal aberrations in human lymphocytes cultured *in vitro* with ceftriaxone. Ceftriaxone showed no potential for mutagenic activity in these studies.

Impairment of Fertility: Ceftriaxone produced no impairment of fertility when given intravenously to rats at daily doses up to 586 mg/kg/day, approximately 20 times the recommended clinical dose of 2 gm/day.

PREGNANCY: Teratogenic Effects: Pregnancy Category B: Reproductive studies have been performed in mice and rats at doses up to 20 times the usual human dose and have no evidence of embryotoxicity, fetotoxicity or teratogenicity. In primates, no embryotoxicity or teratogenicity was demonstrated at a dose approximately three times the human dose.

There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nonteratogenic Effects: In rats, in the Segment I (fertility and general reproduction) and Segment III (perinatal and postnatal) studies with intravenously administered ceftriaxone, no adverse effects were noted on various reproductive parameters during gestation and lactation, including postnatal growth, functional behavior and reproductive ability of the offspring, at doses of 586 mg/kg/day or less.

NURSING MOTHERS: Low concentrations of ceftriaxone are excreted in human milk. Caution should be exercised when Rocephin is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness of Rocephin in neonates, infants and children have been established for the dosages described in the Dosage and Administration section.

ADVERSE REACTIONS: Rocephin is generally well tolerated. In clinical trials, the following adverse reactions, which were considered to be related to Rocephin therapy or of uncertain etiology, were observed:

LOCAL REACTIONS—pain, induration or tenderness at the site of injection (1%). Less frequently reported (less than 1%) was phlebitis after IV administration.

HYPERSENSITIVITY—rash (1.7%). Less frequently reported (less than 1%) were pruritus, fever or chills.

HEMATOLOGIC—eosinophilia (6%), thrombocytosis (5.1%) and leukopenia (2.1%). Less frequently reported (less than 1%) were anemia, neutropenia, lymphopenia, thrombocytopenia and prolongation of the prothrombin time.

GASTROINTESTINAL—diarrhea (2.7%). Less frequently reported (less than 1%) were nausea or vomiting and dysgeusia.

HEPATIC—elevations of SGOT (3.1%) or SGPT (3.3%). Less frequently reported (less than 1%) were elevations of alkaline phosphatase and bilirubin.

RENAL—elevations of the BUN (1.2%). Less frequently reported (less than 1%) were elevations of creatinine and the presence of casts in the urine.

CENTRAL NERVOUS SYSTEM—headache or dizziness were reported occasionally (less than 1%).

GENITOURINARY—moniliasis or vaginitis were reported occasionally (less than 1%).

MISCELLANEOUS—diaphoresis and flushing were reported occasionally (less than 1%).

Other rarely observed adverse reactions (less than 0.1%) include leukocytosis, lymphocytosis, monocytosis, basophilia; a decrease in the prothrombin time; jaundice; glycosuria; hematuria; bronchospasm; serum sickness; abdominal pain; colitis; flatulence; dyspepsia; palpitations and epistaxis.

DOSAGE AND ADMINISTRATION: Rocephin may be administered intravenously or intramuscularly. The usual adult daily dose is 1 to 2 gm given once a day (or in equally divided doses twice a day) depending on the type and severity of the infection. The total daily dose should not exceed 4 grams.

For the treatment of serious miscellaneous infections in children, other than meningitis, the recommended total daily dose is 50 to 75 mg/kg (not to exceed 2 grams), given in divided doses every 12 hours.

Generally, Rocephin therapy should be continued for at least two days after the signs and symptoms of infection have disappeared. The usual duration is 4 to 14 days, in complicated infections longer therapy may be required.

In the treatment of meningitis, a daily dose of 100 mg/kg (not to exceed 4 grams), given in divided doses every 12 hours, should be administered with or without a loading dose of 75 mg/kg.

For the treatment of uncomplicated gonococcal infections, a single intramuscular dose of 250 mg is recommended.

For preoperative use (surgical prophylaxis), a single dose of 1 gm administered ½ to 2 hours before surgery is recommended.

When treating infections caused by *Streptococcus pyogenes*, therapy should be continued for at least ten days.

No dosage adjustment is necessary for patients with impairment of renal or hepatic function, however, blood levels should be monitored in patients with severe renal impairment (e.g., dialysis patients) and in patients with both renal and hepatic dysfunctions.

HOW SUPPLIED: Rocephin (ceftriaxone sodium/Roche) is supplied as a sterile crystalline powder in glass vials and piggyback bottles. The following packages are available:

Vials containing 250 mg equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1962-01)
Vials containing 500 mg equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1963-01)
Vials containing 1 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1964-01)
Piggyback bottles containing 1 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1964-03)
Vials containing 2 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1965-01)
Piggyback bottles containing 2 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1965-03)
Bulk pharmacy containers, containing 10 gm equivalent of ceftriaxone. Boxes of 1 (NDC 0004-1971-01)
NOT FOR DIRECT ADMINISTRATION

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ROCHE®

References:

1. Data on file, Hoffmann-La Roche Inc.
2. Patel IH, Kaplan SA: *Am J Med* 77:17-25, Oct 19, 1984.
3. Richards DM, *et al*: *Drugs* 27:469-527, 1984.
4. Cleeland R, Squires E: *Am J Med* 77:3-11, Oct 19, 1984.
5. Tanner DJ, Nazarian MO: *Am J Med* 77:104-111, Oct 19, 1984.

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS
MEDICAL
LIABILITY
TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

MAAC

TMA Program Assists Physicians in Calculating Medicare MAAC

Physicians who treat Medicare patients have been sent a special mailing by the Medicare Part B Carrier (Blue Cross and Blue Shield of Texas, Inc.). It transmitted individual 1987 Maximum Allowable Actual Charge (MAAC) rates based on the median of April-June 1984 base period charges and the 1987 MAAC 50th Percentile Report. Physicians who have elected to be "non-participating" should examine this information very closely.

In order to make individual MAAC calculations, physicians will need their: (1) "1984 base period charges", (2) "1987 prevailing charge report for participating physicians" or "1987 prevailing charge report for non-participating physicians", and (3) the "median base period report-50th percentile" for non-participating physicians.

An explanation and examples of calculating the MAAC was mailed in a February *TMA Action Extra*.

Computer Program Developed for Calculating MAAC

As a further service to TMA members, a computer program has been developed for calculating MAACs. Physicians familiar with Lotus 123 (Version 2.0) or Symphony (Release 1.2), and have access to an IBM/PC/XT/AT or compatible computer with 512K of memory, can use it to save a substantial amount of time and increase their accuracy in calculating and reviewing their MAACs.

To receive this computer program, please fill out the order form below and send it with a check for $24.00 (sales tax included), made payable to the Texas Medical Association.

Send to: Texas Medical Association
1801 North Lamar
Austin, Texas 78701
Attention: MAAC Program

Order Form for TMA MAAC Computer Program

Please print or type ☐ Check for $24.00 enclosed.

Name: _____

Address: _____

City/State/Zip: _____

Phone: ( ) _____

Please specify type of program:

_____ Lotus 123 (Version 2.0) _____ Symphony (Release 1.2)

Lotus 1-2-3 and Symphony are registered trademarks of LOTUS DEVELOPMENT CORP.
IBM/PC/XT/AT are registered trademarks of International Business Machine Corp.

Motrin® 800 TABLETS mg

ibuprofen

Extra strength
Convenience
Economy

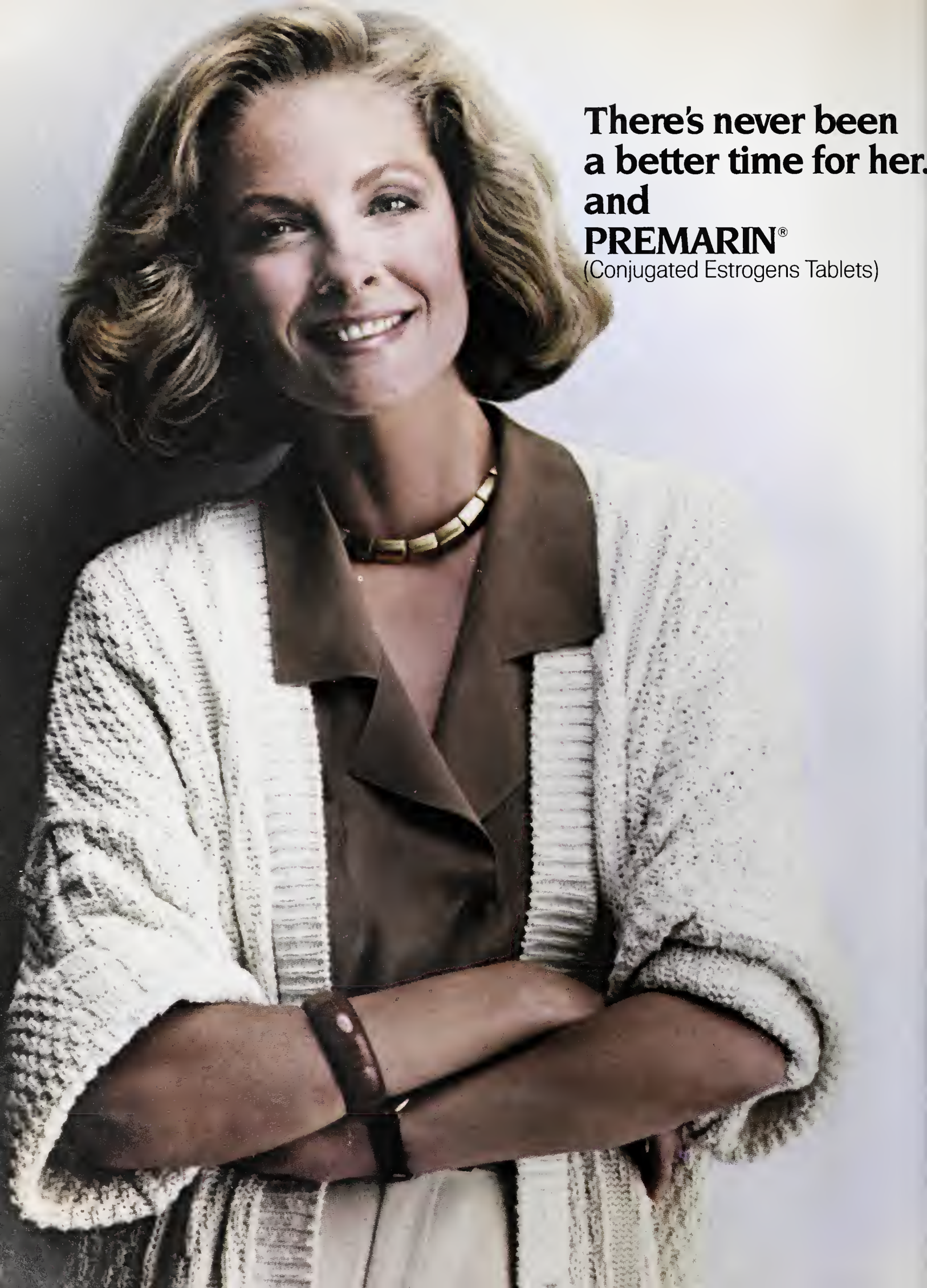
Upjohn

A Century of Caring

1886-1986

©1986 The Upjohn Company

J-6138 January 1986



There's never been a better time for her. and PREMARIN®
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.[1-4] The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.[5]

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms

PREMARIN®
(Conjugated Estrogens Tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

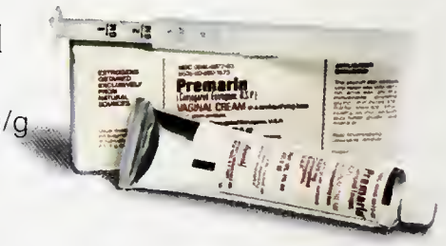
The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(Conjugated Estrogens)

Vaginal Cream

0.625mg/g



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonliquefying base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.

2 ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) **Osteoporosis (abnormally low bone mass).** Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment, increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued, erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate to severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically.* Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Whitehead MI, Townsend PT, Pryse-Davies J, et al: Effects of estrogens and progestins on the biochemistry and morphology of the postmenopausal endometrium. *N Engl J Med* 1981;305:1599-1605. **2.** Paterson MEL, Wade-Evans T, Sturdee DW, et al: Endometrial disease after treatment with oestrogens and progestogens in the climacteric. *Br Med J* 1980;280:822-824. **3.** Magos AL, Brincat M, Studd JWW, et al: Amenorrhea and endometrial atrophy with continuous oral estrogen and progestogen therapy in postmenopausal women. *Obstet Gynecol* 1985; 67: 496-499. **4.** Whitehead MI, Lane G, Siddle N, et al: Avoidance of endometrial hyperstimulation in estrogen-treated postmenopausal women. *Semin Reprod Endocrinol* 1983;1:1;41-52. **5.** Barnes RB, Roy S, Lobo RA: Comparison of lipid and androgen levels after conjugated estrogen or depo-medroxyprogesterone acetate treatment in postmenopausal women. *Obstet Gynecol* 1985;66:216-219.

© 1986 Ayerst Laboratories

Ayerst® AYERST LABORATORIES
New York, NY 10017

T6194/886

PATRICK H. CANTILO, JD

What to do if you believe your malpractice carrier is insolvent

Nineteen insurance companies were placed in receivership in the state of Texas during the fiscal year ending on Aug 31, 1985, and 18 during the 1986 fiscal year. It is no wonder, then, that the public is becoming increasingly aware of financial problems in the insurance industry and that insureds are increasingly concerned about the vitality of their coverage. This article considers some simple steps that should be taken by an insured who suspects that his company may not be financially sound.

Patrick H. Cantilo, JD, Freytag, Perry, LaForce, Rubinstein, and Teofan, PO Box 184, Austin, TX 78767.

For a variety of reasons, rumors constantly abound regarding the likely or apparent insolvency of a number of insurance companies. Insurance companies, like banks, tend to have names that are very similar to those of numerous other companies and it is easy to confuse them. An insured who is led to believe that his company may be in dire financial straits should first of all determine whether it is indeed his carrier that is at issue. The company's correct name will be stated in the insurance policy and it should be compared to the name provided by whatever source of information has raised the specter of insolvency. In case of doubt, the agent who sold the policy in the first place or the State Board of Insurance should be contacted. Calling the company itself should not be ruled out as an option.

Determine the company's financial condition

There can be a world of difference between financial problems and insolvency. While the difference may be one of degree to some extent, the impact on coverage may be dramatically different in the two situations. Simply put, a company having financial problems but not yet insolvent is probably maintaining all coverages in force. An insolvent company, on the other hand, may be in liquidation or receivership and its coverage may no longer be effective as to future claims. A concerned insured should therefore determine the exact nature of the company's problems. Insurance regulators frequently take remedial steps against companies long before their financial problems are insurmountable. They might, for example, limit the ability of the company to write new business (sell new policies), require the company to rid itself of certain poor investments, insist that the owners of the company infuse additional capital, or require that the company entirely get out of a certain class of insurance business. Such measures may suffice to remedy any existing problems or prevent the aggravation of mild, but alarming, symptoms. They do not necessarily indicate that the company's future is hopelessly grim. Nevertheless, such steps often receive wide publicity without full explanation of their significance. A concerned insured should therefore determine first whether the company is indeed insolvent or has merely come to the attention of the regulator because of unsound or undesirable practices. Learning that a company is in supervision is far different from learning that it is in receivership. A company in supervision normally continues to write new business and its policies generally are not prematurely cancelled. An insured whose company is subjected to such action may not need to replace that coverage or unduly concern himself at this early stage. However, upon learning that his company is in supervision, the insured should become increasingly aware of any developments in that company's financial condition. One hopes the insurance department supervisor will remedy whatever problems the company is manifesting so that it may continue operating as a sound company. However, if the company is placed in conservatorship or receivership, its financial problems may be far more serious. At that point, the insured may well wish to consider replacing his coverage with that provided by another, presumably healthier, company.

SOURCES OF INFORMATION

Agents: Often, determining the exact status of the company is very difficult. A good source of information may be the agent who sold the policy in the first place. Particularly if he is an independent agent, he will have every incentive to keep the insured accurately informed. On the other hand, even the agent may not be well informed because the company and the department have not made such information public knowledge. It is worth noting that an agent who knowingly misinforms or misleads an insured may be personally liable for any harm resulting to the insured.

State Board of Insurance: The State Board of Insurance is also an excellent source of information to the extent that the company's condition is legally susceptible of disclosure. And, there is nothing wrong with going straight to the source. In case of doubt, contacting the company almost always provides at least some useful information, although there is a natural tendency by insurers to discourage harmful rumors by understating or putting in subtle terms the extent of their problems.

Annual Statements: The annual statements filed by insurance companies with insurance departments are public records available for inspection by anyone at the insurance department. The results of triennial examinations by the department's financial examiners, however, are not public and therefore not readily available. Similarly, monthly or quarterly financial statements or reports filed with the department are not generally public records. Most frequently, the annual statements that are generally

available to the public may be dated and therefore of limited value to the insured of a company whose financial condition is changing rapidly.

Commercial Ratings: Certain trade publications also analyze the health of insurers with regularity and assign them values on an arbitrary scale. The best known of these is *Best's Reports,* which is extremely well respected in the industry. The single major problem with reliance on such assessments is that they tend to be dated by the time of publication. While examining such assessments over several years may be useful in terms of establishing a trend for the company, and while such assessments have significant value for very substantial carriers, in the case of a marginal insurance company whose financial condition is changing rapidly, such information may simply not be sufficiently current.

Obtaining information

One of the most frustrating aspects of insurer insolvencies is the difficulty in obtaining reliable information about the company's true condition. Interested parties should almost always contact the insurance department for its official position and whatever other information it is willing to disclose. If a receiver has been appointed, he or his staff will normally be very helpful in explaining what must be done to protect the insured's or claimant's rights against the company. Similarly, if the company is in supervision or conservatorship, the supervisor or conservator should be called to determine the status of the company and its implication for the insured or claimant. If the company is not yet in supervision, conservatorship, or liquidation, the agent should be contacted to determine what, if anything, he knows about its condition and the likelihood that it will worsen. The company itself may also be willing to disclose such information although extensive reliance on disclosures by company management may not always be advisable. In the case of multi-state companies, the National Association of Insurance Commissioners' home office in Kansas City, Mo, can also be a useful source of information. In addition, trade publications may provide useful information earlier than in the general press.

Determine guaranty fund coverage

If a policyholder's insurer is placed in receivership he should quickly determine whether a guaranty act will provide him at least some protection. Largely in response to a prior insurance crisis and the threat of federal regulation, in the early to mid-1970s the various states enacted what are called guaranty fund or security fund statutes. These acts principally provide for the creation and maintenance of a special kitty funded by contributions from the various insurance companies doing a particular kind of business in each state from which will be paid the claims presented by policy holders or claimants of an insolvent insurer engaged in that particular kind of business. In Texas, such acts can be found at Articles 21.28-C, 21.28-D, and 21.28-E of the Texas Insurance Code, and they encompass both property and casualty and life, accident, and health insurers. With respect to malpractice coverage, in all likelihood the applicable provisions will be those found in the Property and Casualty Insurance Guaranty Act, Article 21.28-C. As recently amended, this statute provides for payment of up to $100,000 per "covered claim" which, as defined, would probably include an insured's liability to a plaintiff in a malpractice claim, but would not include attorney's fees incurred in the defense of such claim prior to the designation of the company as an "impaired insurer." Whether or not an insurer is "impaired" depends on whether or not it has been placed in receivership or whether the commissioner has so designated it. There can be no guaranty fund coverage of a claim unless the carrier has been designated impaired. Experience teaches that by the time a company is placed in receivership, the amount of assets it has available for the payment of claims is marginal or insignificant. Often, such assets are barely sufficient to pay the expenses of administering the receivership, which may indeed be substantial. Given the foregoing, if the guaranty act does not apply, the chances a claim will be paid are greatly reduced.

Determine claim status

If an insured has a claim outstanding against a carrier whose financial condition is suspect, it behooves him to determine the status of that claim. In the event that it is a liquidated claim which has already been submitted for payment with full documentation, any delay in the payment of such claim should be thoroughly explored and referred to the State Board of Insurance for appropriate attention. If such measures are insufficient, the insured may wish to retain private counsel to precipitate satisfactory response from the carrier. If the claim is not liquidated, such as a pending malpractice claim, an effort should be made to assure that those charged with defending the claim are being properly paid by the insurance company and that the company is willing and able to pay any settlement or resulting judgment when the claim is finally adjudicated or resolved. If the company is insolvent, it is important to note that fees incurred in defending the claim are probably not going to be paid by the receiver or the guaranty association at least until the claim itself is paid, if at all. The insured will therefore have to make his own arrangements for the defense of the claim until that date. In case of doubt, the company's receiver, the insurance department, or the agent should be contacted to determine if a defense will be provided to the insured.

Determine viability of policy
In the event that the company's condition is suspect, it is critical to determine whether the policy remains in force. The insured should first determine the effective date of the policy and, in particular, its expiration date. If that date is imminent, efforts to replace it should begin at once, since its renewal may not be possible. If that date is far off, a determination should be made regarding the likelihood that the policy will be prematurely cancelled because of the company's financial condition. If premature cancellation appears likely, efforts to replace it should begin without delay. Even when an insolvent company is reinsured so that another company assumes its policy liabilities, it is not unusual for such assumption to be conditional or limited. If a satisfactory alternative coverage is available at a reasonable price, it is probably preferable to obtain it.

Present claims
If the company is in receivership, the insured or claimant should immediately determine what steps he must take to preserve his rights against that company for claims arising under its policies. Frequently this will require the completion and presentation of a sworn proof of claim to the receiver. The claim form generally is provided by the receiver and must be accompanied by supporting documents when returned to the receiver. Relatively short claim filing periods are not unusual and delay in presenting claims may be fatal.

A note about lawsuits
Article 21.28, Section 4, of the Texas Insurance Code provides that the receiver need not plead in an existing lawsuit in which he may be a proper plaintiff or defendant for one year following his appointment, and that judgments against the company after it is placed in receivership are not binding on the receiver unless he is made a party. The result, effectively, is to impose a stay on existing lawsuits of up to one year.

Third-party claims
Third-party claimants, such as those who file a malpractice suit against a malpractice insured, have the right to file their claims directly with the receiver. Any judgments they may obtain against the insured after the "commencement of delinquency proceedings" cannot be considered as evidence of liability or amount of damages by the receiver. Insofar as the coverage is concerned, therefore, continuing a suit against the insured after the company is placed in receivership is probably a waste of time and money.

Conclusion
Insurer insolvencies are increasingly commonplace and tend to have widespread effect on the public. While it is impossible to guard against one's own company suffering that fate or against any loss resulting therefrom, an informed claimant or insured is in a much better position to protect himself. It is hoped that this article will help in understanding the significance of a company's becoming insolvent or being placed in receivership, and will assist in minimizing the adverse impact of such developments on insureds or claimants.

ROCHE®

BECAUSE ONLY VALIUM

2 mg 5 mg 10 mg

IS ALWAYS VALIUM®

brand of diazepam/Roche®

REMEMBER TO WRITE "DO NOT SUBSTITUTE."
IT'S THE ONE YOU KNOW BEST.

Copyright © 1987 by Roche Products Inc. All rights reserved.

The cut out "V" design is a registered trademark of Roche Products Inc.

ROBERT A. ERSEK, MD
JACK ZAMBRANO, MD
GARY SURAK, MD
DAVID DENTON, PHD

Suction lipectomy: a useful new tool for the plastic surgeon

The development of small (3–6 mm diameter) blunt cannulas has enabled plastic surgeons to remove large and small subcutaneous fat deposits from virtually every place in the body. Limiting these removals to less than 2,000 cc enables us to perform this surgery as an outpatient procedure and contour the body to correct figure faults for a variety of aesthetic and functional diagnoses. Our experience with nearly 1,000 procedures over four years demonstrated minimal complications with a high patient satisfaction.

Robert A. Ersek, MD, Clinical Instructor in Plastic Surgery, The University of Texas Health Science Center, San Antonio; Jack Zambrano, MD, Austin; Gary Surak, MD, Huntington, WVa; and David R. Denton, PhD, Austin. Send reprint requests to Dr Robert Ersek, Park St David's, 30th and Red River, Suite 309, Austin, TX 78705.

Among the many problems that plastic surgeons face, one of the most common, especially among women, is that of localized fatty deposits that are out of proportion with overall bodily contours. Until recently, the only means of improving these figure faults was by surgical removal of the entire offending area, including overlying and surrounding skin. No matter how skillful the surgeon, some scarring was unavoidable in such procedures, with results often no more acceptable than the original defect. Now, in the blunt technique of suction-assisted lipectomy, we have a new method for removing fatty deposits with minimal scarring and consistently satisfactory results.

Many early reports on removal of subcutaneous fat by suction curettage utilized some variation of the so-called "sharp" technique. Complications were common using this technique, which involves sharp undermining and scraping of the skin prior to removal of loosened fat by suction. As a result, the sharp technique, though widely employed in Europe, gained little support in thc US.

The blunt technique

The French surgeon Illouz (who trained in plastic surgery in the US) developed a technique of suction lipectomy that avoided many of the problems of the sharp technique (1). The Illouz technique, also known as the "blunt" technique, utilizes a blunt cannula with a blunt hole on one side. This cannula, which may measure from 3–8 mm in diameter, is passed under the skin into the fatty deposit. Fat cells are then removed by application of maximum amounts of suction as the cannula is passed in and out in multiple radial pathways until all desired fat cells have been removed. By moving it back and forth in this manner, never in a side-to-side "windshield wiper" motion, the cannula tends to push nerves and vessels aside, rupturing only the amorphous, fragile fat cells. Perforating vessels are not injured and a diffuse network of tissue attachment remains, connecting the overlying skin to the underlying fascia.

When the suction lipectomy is first begun, the suction tubing contains a bright, clear yellow fat that is semi-fluid, flowing gently and evenly up the tubing. Once an area has been "vacuumed clean," the effluent becomes first pink-tinged and then red. This indicates it is time to cease suction in that area. Once all desired fat cells have been removed, wounds are closed with absorbable subcuticular stitches and reinforced with suture strips (Genetic Labs). Drains are not required and hematomas are rare in areas treated.

Applications

The Ad Hoc Committee on New Procedures of the American Society of Plastic and Reconstructive Surgeons (ASPRS), after an intensive investigation, reported on the Illouz blunt technique of suction lipectomy in 1983. "It would appear that we now have a relatively satisfactory surgical method," the report concluded, "if utilized in the hands of appropriately trained and experienced surgeons for the treatment of disharmonious obesities or congenital steatorrheas (segmented genetic fat)." The committee concluded that the blunt technique is safe and effective not only for the removal of saddle bags (ie, riding britches) but also for "removal of fat from the abdomen, hips (love handles), medial thighs, larger saddle bag deformities, and can be extended to fat deposits of the knees, arms, or lipomas" (2).

The blunt technique, as refined in the US by Hetter, Courtiss,and others, has in fact become the preferred technique for correction of most localized figure faults caused by isolated fatty deposits that are resistant to diet therapy (3–6). Suction lipectomy has also proven useful in altering facial contours in plastic surgery (7).

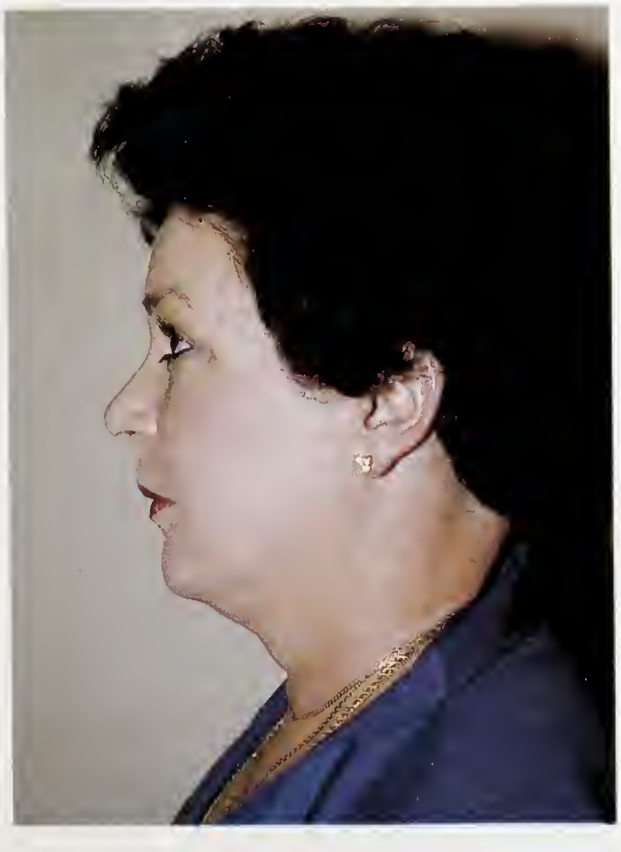
Suction lipectomy, it must be clearly emphasized, is not indicated for treatment of generalized obesity but only for localized fatty deposits. Within this limitation, the technique has multiple possible applications. We have used the blunt technique to those areas recommended by the ASPRS but also to the cheeks, neck, scalp, mons, and buttocks. We have even used it to remove excess fat in the axillary folds and behind the borders of the latissimus dorsi muscle into the back for a more satisfactory cosmetic result in breast rcductions. Suction lipectomy is also useful in removing fat from the edges and corners of larger wounds where other reconstructive procedures have been done. We have removed multiple lipomas from the neck, back, arms, and thighs, removing as much as 2,300 mL of fat via a single 3-cm remote scar. Releasing a 10 x 25 cm abdominal flap to cover a degloved hand, we were able to close the entire donor site primarily by sucking a liter of fat from each side of the waist. The patient, who was moderately obese, would otherwise have required a large skin graft.

A key element in the success of suction lipectomy

1. Patient 1: a. (before) and b. (after): Suction lipectomy was used to remove approximately 1,000 mL from each side of the "saddle bag" area in this 26-year-old woman.

2. Patient 2: a. (before) and b. (after): Approximately 3,500 mL of fatty deposit were removed from the abdomen, medial and lateral thighs, and buttocks in this 46-year-old woman.

3. Patient 3: a. (before) and b. (after). Approximately 1,500 mL of fatty deposit were removed from waist, and "love handles" and 1,000 mL from medial thighs and buttocks. The patient was a 29-year-old man.



4. Patient 4: a. (before) and b. (after). This 50-year-old woman underwent suction lipectomy to remove 40 mL of fat from her cheeks and neck. No facelift or other surgery was performed.

is patient selection, not only as regards identification of problems but of appropriate expectations as well. The procedure is useful in improving the patient's existing overall bodily contours, and patients should clearly understand and accept this. The patient with a totally negative body image will not be helped and may even be dissatisfied with realistically attainable results.

Clinical considerations

The total amount of fat removed by suction lipectomy varies widely. We have removed as much as 8,000 mL from a single patient, but the amount removed is most often under 2,000 mL. Such smaller cases can be routinely done under local anesthesia on an outpatient basis, with minimal blood loss. Hospitalization and general anesthesia are indicated where the amount to be removed approaches 3,000 mL. Beyond this level, the need for blood replacement increases rapidly. Because of this, we have had a number of patients needing removal of large amounts of fat opt for what we have termed serial suction lipectomy. In two or more outpatient procedures spaced several weeks apart, we remove smaller amounts of fat until the final result is achieved.

Serious complications using the blunt technique are rare in well trained hands, but serious life-threatening injuries have occurred when basic principles were violated. The most common postoperative problem we have seen is a slight waviness or wrinkling of the skin over the treated area. Older patients with visibly loose skin may tend to have less satisfactory results. Skin discoloration and changes in sensitivity in the treated area are encountered less frequently, and these usually improve after a relatively short time. Results in four separate patients are shown in Figs 1–4.

In summary, the blunt technique of suction-assisted lipectomy is a safe, effective procedure for correction of figure faults caused by localized fatty deposits as well as a useful adjunct to improve results in numerous other plastic surgery procedures.

REFERENCES

1. Illouz YG: The origins of lipolysis, in Hetter GP (ed): Lipoplasty, The Theory and Practice of Blunt Suction Lipectomy. Boston, Little, Brown and Co, 1984, pp 25–32.

2. Ad Hoc Committee on New Procedures: Report of the Commission on Surgical Suction Lipectomy. American Society of Plastic and Reconstructive Surgeons, Inc, Chicago, 1983.

3. Hetter GP, Herhahn F: Experience with "lipolysis": The Illouz technique of blunt suction lipectomy in North America. Aesthetic Plast Surg 7(2):69–76, 1983.

4. Hetter GP: Lipoplasty, The Theory and Practice of Blunt Suction Lipectomy. Boston, Little, Brown and Co, 1984.

5. Courtiss EH: Suction lipectomy: a retrospective analysis of 100 patients. Plast Reconstr Surg 73(5):780–796, 1984.

6. Agris J, Varon J: Suction Assisted Lipectomy, Clinical Atlas. Houston, Tex (6560 Fannin St, Scurlock Tower, Suite 1730, Houston).

7. Newman J, Dolsky RL, Mai ST: Submental liposuction extraction with hard chin augmentation. Arch Otolaryngol 110(7):454–457, 1984.

PEGGY B. SMITH, PHD

THE HONORABLE
LENA GUERRERRO

ELISA MAY, MSW

Teenager pregnancy policies and the 70th legislative session

Policy issues and financial aspects associated with adolescent pregnancy in Texas are outlined. Legislation initiated in previous sessions addressing adolescent child bearing and rearing are reviewed. Regional concerns are also highlighted with emphasis on ways to coordinate the efforts of various public agencies concerned with the problem. Future legislative strategies are suggested which catalyze existing resources in a cost-effective manner.

More than 1 million teenagers become pregnant in the US each year. About 60% of these teenagers deliver at term (600,000 births). The United States teenage birth rate is among the world's highest, with one out of every five children born to teenagers. About 40% of pregnant teenagers have elective abortions, accounting for one third of all pregnancy terminations in the US. Of the teenagers whose pregnancies continue to term, 96% choose to keep their babies. In Texas in 1984, 46,987 women 19 years of age or under delivered liveborn infants. Of this group, 1,088 were 14 years old or younger (1). The majority of these births were to unmarried teenagers, at significant public cost. The Center for Population Options estimated that a first baby born to a teenage mother in 1985 will cost the state taxpayer $15,620 by the time that baby reaches age 20 (2). Babies born to mothers less than 14 years old will cost $18,089; babies born to mothers from 15 to 17 years old will cost $17,203; babies born to older teenagers will cost $14,481. Had these babies been born to mothers at least 20 years old, taxpayer savings would be $6,248 per year. These cost estimates include AFDC, Medicaid, food stamps, public housing, and social services costs.

As these figures show, the costs of teenagers' pregnancy can be documented, but the solutions are not so easily attained. Legislative policy decisions concerning adolescents are difficult for a variety of reasons. The very philosophical foundations of the legislative process retard progressive action in that most laws for minors are based on the assumption that adolescents have no civil rights and lack the ability to make sound decisions about medical treatment. Recent action in the 69th Texas legislative session allowed for psychiatric care of children without parental consent. In general, however, medical decisions, though perhaps in the teenager's best interest, are perceived as invalid if the adolescent rather than the parent makes it. Nonetheless, staggering financial burdens have forced some state legislative bodies, as in Wisconsin and Connecticut, to deal with this sensitive issue in a public forum. As costs for public welfare services escalate and available revenues shrink, personal attitudes on adolescent sexual activity are replaced by the need to act in the public's fiscal best interest. Eventually even the most controversial issue, if it attracts significant visibility because of associated public subsidy, will stimulate open debate and subsequent legislation addressing social change. It appears that the state of Texas is no exception.

Past legislative concerns

While legislative efforts in past sessions have focused primarily on special education programs for pregnant teenagers, a mandate for legislating broad-based health and social changes on the behalf of pregnant and sexually active adolescents occurred in the 68th legislative session through the establishment, by the House Speaker, of an interim select committee on pregnancy among teenagers. The committee studied the statewide impact of unplanned adolescent pregnancy and recommended public and private sector initiatives to provide primary and secondary health services to adolescents. Policy reassessment from the private sector was also encouraged. Recommendations of this study affected school districts, insurance carriers, and even the delivery of medical services. While not all the recommendations were enacted, this legislative process initiated a cadre which demanded continuous public attention on the subject. The Texas Health and Human Services Coordinating Council also augmented this initiative and attempted to clarify the issues around teenager pregnancy in the state. Current efforts of the Health and Human Services Subcommittee on Teen Pregnancy continue to remind legislators of the need to address the problem. This review and assessment of the needs of adolescent mothers also highlighted gaps that were identified after implementation actions.

Recommendations for future legislation

A variety of strategies would improve reproductive and maternity services for adolescents. One strategy would provide incentives to service agencies such as the hospital districts and third-party providers to seek out and serve adolescents. Indigent adolescents present a cost-effective target for intervention. These incentives could be coordinated with indigent health care legislation so that eligibility criteria, a prerequisite for service delivery, could be waived or modified for teenagers. Medicaid reimbursements could be similarly modified. Guidelines issued through the US Department of Health and Human Services established a reimbursement process for prenatal services for income-eligible, first-time mothers. However, the steps necessary to obtain such services often prove to be effective barriers to the adolescent. Simplified and streamlined eligibility procedures for pregnant adolescents would enhance their early maternity enrollment in

Peggy B. Smith, PhD, Associate Professor, Department of Obstetrics and Gynecology, Baylor College of Medicine; The Honorable Lena Guerrerro, Texas House of Representatives, PO Box 2910, Austin, TX 78769; Elisa May, MSW, Legislative Assistant to State Representative Lena Guerrerro. Send reprint requests to Dr Smith, Department of Obstetrics and Gynecology, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.

these programs. This facet of health care is crucial to reduction of perinatal morbidity and mortality.

Nonservice delivery activities should also be considered. A data-gathering mechanism should be established so that the incidence of adolescent pregnancy and related reproductive health needs can be monitored on a regional basis. Guidelines to coordinate all concerned state agencies would ensure a comprehensive product. A yearly report describing the health needs of all Texas children and youth, and documentation of available services and the lack thereof, would be useful. In order to assess whether efforts are meaningful, a program evaluation and monitoring system should also be included. The short-term encumbered costs can easily be justified by an empirically sound evaluation design. Such evaluation systems can guide state agencies as well as the Texas Legislature as to whether adolescent pregnancy initiatives make a difference.

Special state needs

As we address issues associated with the reproductive health of teenagers, we must realize that rural areas are in special need of improved services. This problem is exacerbated not only by the fact that there are few rural service providers, but also by the size of rural areas. To facilitate the coordinating of effort, the focus should be on a mechanism to stimulate input from various geographic areas. Development of regionalized advisory groups would enhance grassroots support in isolated areas. This advisory process could bridge public agencies and local entities regarding the sensitive issues of adolescent sexuality. This is especially important for curriculum development in health education or sex education in public schools. In the past, community groups initially concerned about adolescent pregnancy were reticent to implement family life or sex education programs for fear that their input would not be solicited on the development of curricula. Regional curriculum committees generated from the advisory group process could solicit input so that sex education programs could be implemented with community support instead of resistance. Such committees could also facilitate the creation of new laws affecting Texas Education Agency policy and therefore curriculum statewide. For example, any courses associated with family life and sex education are at local school district option. It should be recommended that course work be mandated and that the content be at local discretion and input. This would allow local jurisdiction on controversial issues while the core area would be provided through the legislative mandate.

Innovative ways for study

One way to evaluate public efforts in Texas is to compare them to selected efforts of other states. Several lessons can be learned from other initiatives. The Wisconsin legislature, in its efforts to combat teenage pregnancy, has adopted a law that holds parents financially responsible if their children under the age of 18 have babies. Under this measure, adopted in November 1985, a welfare agent could take an adolescent's parents to court to make them pay for the expenses of raising the baby. The legislative intent of this unique approach is to reduce teenage pregnancy by increasing discussion between parents and teenagers on sex. Controversial as it may sound, it is a sincere effort to reduce the number of babies born to Wisconsin girls under 18. Effectiveness of the law will be evaluated throughout the next legislative session.

Another innovative funding strategy to develop programs in adolescent pregnancy prevention is similar to the Children's Trust Fund established in the 69th Texas Legislature. Under this fund, programs for the prevention of child abuse and neglect are to be financed through a dedicated percentage of the state's marriage license fees. Programs in adolescent pregnancy prevention could be similarly funded. Possible areas of increased user fees could be birth certificates to fund a variety of infant-related services that would directly benefit adolescent pregnancy.

A third idea enlists the support of elderly citizens to serve as surrogate "extended family" members. In the past 20 years, the role of the extended family has declined. In addition, the mobility of the family has increased so that elderly family members can no longer assist in the rearing of the young. While there are valid economic, social, and psychologic reasons for severing the "umbilical cord" between new families and grandparents, the absence of the extended family members, specifically during the adolescent years, may contribute to the risk associated with early sexual activity. Estimates suggest that 40% of latchkey children were sexually active, indicating that risk for adolescent conception may also occur during the daytime hours when no adult figure is present to supervise the adolescents' activities. The increasingly large cohort of older people in the general population can form a reservoir of surrogate "foster grandparents" to assume the roles previously held by homemaker mothers and nearby extended family members.

Conclusion

As the financial obligations associated with teenage pregnancy increase, especially in a period of limited financial resources, policy makers are forced to deal with adolescent sexuality and pregnancy more proactively. Such a mandate, if only to balance the state's budget, requires prevention of the problem rather than remediation. Careful coordination and documentation of existing services is associated

with this mandate in order that public funds spent can be justified. Through such strategies, the public and private health care and educational sectors can work together so that unplanned adolescent pregnancy is no longer a major threat to the future of a number of our state's young people.

REFERENCES

1. Texas Department of Health, Texas Vital Statistics, 1986.
2. Burt M: Public Costs for Teenage Childbearing. Washington, DC, Center for Population Options, 1986.

ACKNOWLEDGMENTS

The authors gratefully acknowledge Debbie Ford for typing the manuscript and Laurilynn McGill, MPH, for her review and comments on the manuscript.

TEXAS MEDICAL ASSOCIATION

HealthWise Series

A collection of educational brochures for your patients

Tobacco Products
Hazards You Could Live Without

Blood Donation
Give Blood So Others Can Live!

Becoming a Physician
The Challenge of Medicine

Accidents—
They Don't Just Happen

Health Fraud
The Voice of Misinformation

Immunizations—
Investing in a Healthy Future

Putting Together the Health Care Puzzle

Your Health is in Your Hands

Drunken Driving
Everyone's Problem

You and Your Doctor
Partners in Health Care

Love Sick
Sexually Transmitted Diseases

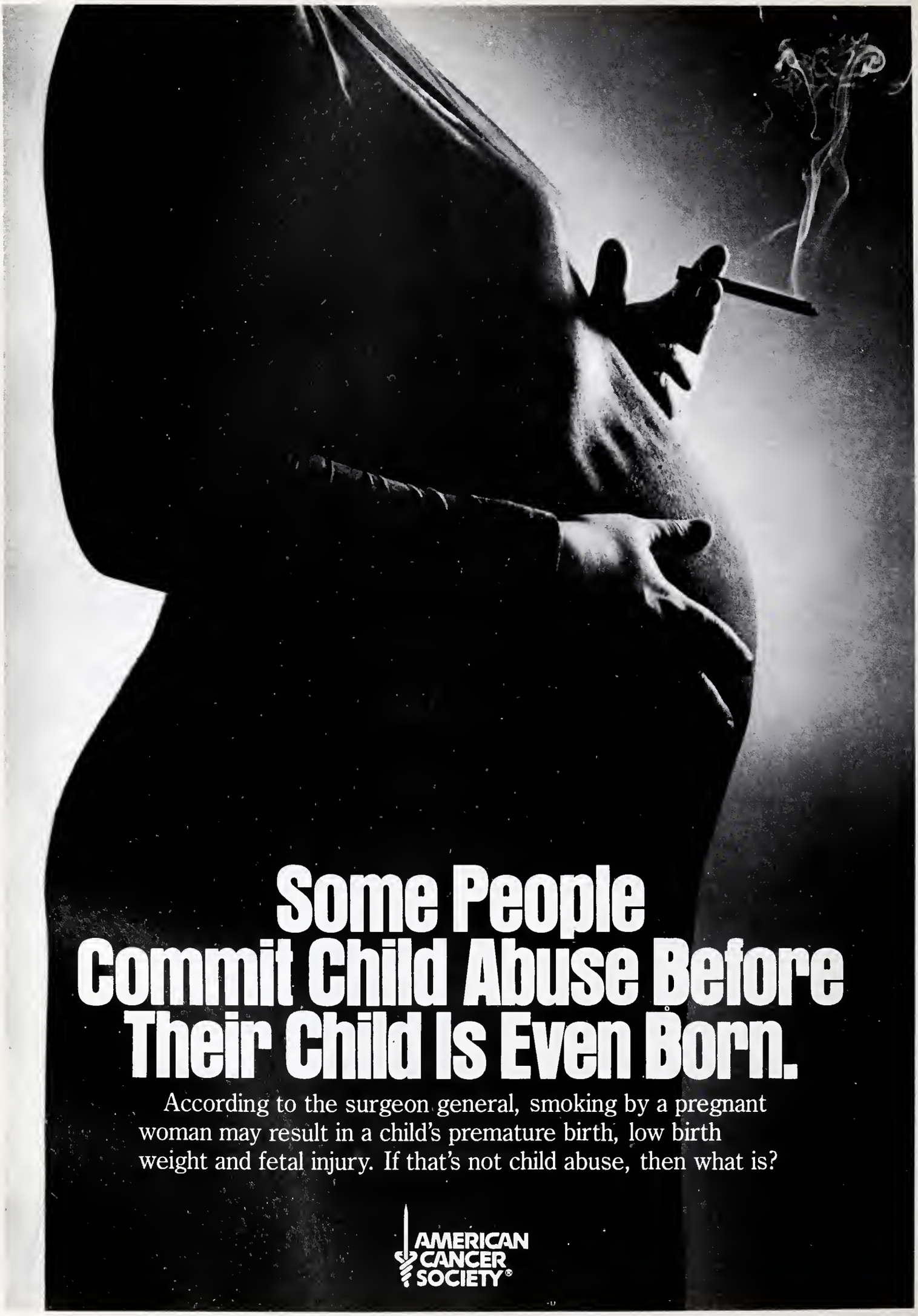
Click—
The Sound of Saving a Life

Feeling Good Means Being Health-Wise

Aging in Good Health

Good Health—
Does It Have to Cost a Lot?

Call or write for free samples and order form:
Texas Medical Association
1801 North Lamar Boulevard
Austin, Texas 78701
512/477/6704, Ext. 212


Some People
Commit Child Abuse Before
Their Child Is Even Born.
According to the surgeon general, smoking by a pregnant woman may result in a child's premature birth, low birth weight and fetal injury. If that's not child abuse, then what is?
AMERICAN CANCER SOCIETY®

ALEXANDER P. REMENCHIK, MD

DAVID P. SUFIAN, DO

RASIKA R. DEHKNE, MD

Nonparadoxical systemic artery embolus

We are reporting a patient who experienced a systemic arterial embolus coincident with a massive pulmonary embolus. The source of the systemic arterial embolus was a pulmonary vein. A MEDLARS search of the literature failed to locate a case report describing this phenomenon; however, systemic emboli arising from pulmonary vein thrombi, in the presence of pulmonary infarcts, have been described (1).

A 71-year-old white woman was brought to the emergency room with complaints of dyspnea, mild diaphoresis, and retrosternal chest pain radiating into the neck. The physical examination was essentially within normal limits except her blood pressure was 158/110 mm Hg. A presumptive diagnosis of an acute myocardial infarction was made, and she was admitted to the intensive care unit for further evaluation and treatment. Laboratory data on admission to the intensive care unit were essentially within normal limits except for serum potassium (K_s), 3.2 mEq/L; serum urea nitrogen (SUN), 23 mg/dl; SGOT, 43 units (normal: 25–41); lactic dehydrogenase (LDH), 250 units (normal: 100–199); creatine phosphokinase (CPK), 194 units (normal: 21–215), and the CPK isoenzymes showed a 3.8% MB fraction. The chest roentgenogram was within normal limits. The electrocardiogram on admission showed first-degree atrioventricular block, left atrial hypertrophy, and nonspecific repolarization changes. The patient was symptom free after admission to the intensive care unit. Within the next 48 hours the presumptive diagnosis of myocardial infarction was ruled out and evidence for peripheral vascular occlusion was not discovered. Her blood pressure decreased to 110/70 mm Hg.

On the morning of the third hospital day, she began to complain of substernal chest pain and general discomfort. She was restless and appeared apprehensive. Nitroglycerin was given sublingually without relief. The rhythm was sinus. Approximately 30 minutes after the onset of her complaints she could not be aroused and the monitor showed an apical rate of approximately 40 beats per minute. The chest was thumped and immediately her apical rate rose to 72 beats per minute. She became responsive. Shortly thereafter she developed ventricular tachycardia. Her chest was thumped again, a bolus of lidocaine was administered, and a lidocaine drip was started. The patient converted to sinus rhythm with a rate of approximately 90 beats per minute. At that time she began to complain of chest discomfort and severe right lower extremity pain. Her right extremity was warm; however, the femoral, popliteal, and dorsalis pedalis pulses were not palpable. A presumptive diagnosis of arterial embolism was made.

The patient continued to have complaints of chest discomfort. The electrocardiogram at that time showed first-degree AV block with sinus rhythm, right bundle branch block, and left atrial hypertrophy. The arterial blood gas data were: pH_a, 7.43; $P_a CO_2$, 47 TORR; and $P_a O_2$, 45 TORR. A presumptive diagnosis of pulmonary embolism was made. The patient was prepared for an iliofemoral arterial embolectomy by administration of heparin. The embolectomy was uneventful. After closure of the skin the patient sustained a cardiac arrest and could not be resuscitated.

Postmortem examination revealed a massive saddle-shaped thromboembolus in the right and left pulmonary arteries (Fig 1). A medium-sized pulmonary infarct was present in the right middle lobe. Multiple small and medium-sized thrombi were present in the pulmonary veins (Fig 2). The thromboembolus removed from the right femoral artery is illustrated in Fig 3. Careful examination failed to reveal any evidence of atrial or ventricular septal defects or pulmonary aortic windows or shunts.

Alexander P. Remenchik, MD, David P. Sufian, DO, and Rasika R. Dehkne, MD, Eastway General Hospital, Houston. Send reprint requests to Dr Remenchik, 8799 North Loop East, Suite 250, Houston, TX 77029.

1. Saddle thromboembolus, removed from the main pulmonary artery.

Comment

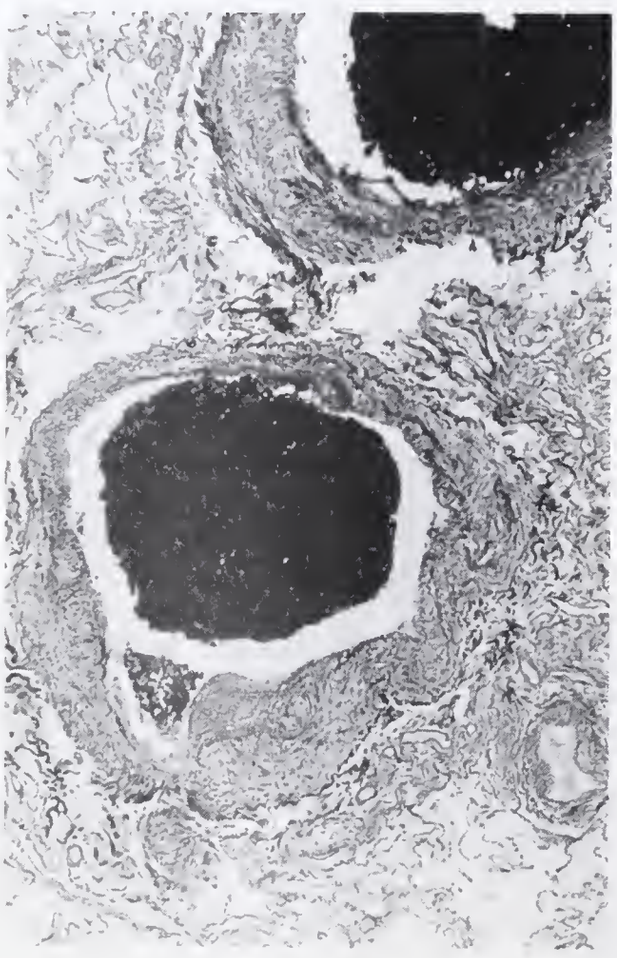
The anatomic data support the interpretation that the systemic artery embolus originated as a thrombus in a pulmonary vein. What is not clear is whether the pulmonary vein thrombus was dislodged by the chest thumps or by the impact of the systemic vein thrombus upon the pulmonary circulation. In view of the fact that systemic artery emboli have not been previously reported as a complication of chest thumping during the course of cardiac resuscitation, we infer that the pulmonary artery embolus may indeed have been responsible for dislodging the pulmonary vein thrombus. Systemic artery emboli in the absence of cardiac disease have been attributed to passage of emboli through a patent foramen ovale. Our experience suggests to us the source of these emboli are thrombi in pulmonary veins associated with pulmonary infarcts; therefore, pulmonary infarcts should be considered in the differential diagnosis of the etiology of systemic artery emboli. Furthermore, these systemic artery emboli may be responsible for unusual complaints, such as abdominal pain and chest wall tenderness, which have been reported to be associated with pulmonary emboli (2,3).

REFERENCES

1. Spain DM, Moses JB: Thrombosis and embolism of pulmonary vessels with special reference to pulmonary vein thrombosis. Am J Med Sci 212:707–712, 1946.
2. Henderson AF, Moran F, Banham SW: Pulmonary thromboembolism presenting as abdominal pain. Br Med J (Clin Res) 289(6449):902–903, 1984.
3. Dreyfuss AI, Weiland DS: Chest wall tenderness as a pitfall in the diagnosis of pulmonary embolism. Arch Intern Med 144(10):2057, 1984.

3. Right femoral arterial thromboembolus.

2. Silver (GMS) stain of pulmonary veins and in-situ thrombi at 216 x magnification.



DUDLEY H. DAVIS, MD
J. TERRY WILKINSON, MD
A. KENT TEAFORD, MD
MITCHELL R. SMIGIEL, MD

Sciatica produced by a sacral perineurial cyst

A 51-year-old woman came to our clinic for evaluation of a "sciatic nerve problem" that had persisted for 18 months. A myelogram was unrevealing but a computed tomography scan suggested the presence of a sacral mass. The patient responded well to excision of the cyst. This case serves as a reminder that perineurial cysts can be symptomatic and emphasizes the complementary relationship of myelography and the spinal CT scan.

In 1938, Tarlov described perineurial cysts of the spinal nerve roots. He speculated about the clinical significance of these cysts and wondered if "they might not be responsible for the discomfort in certain cases of sciatica or nerve root pains in which any other pathological basis has been excluded" (1). In 1948, he reported a case of a symptomatic perineurial cyst and advocated surgical treatment (2). There have been subsequent reports of perineurial cysts causing backache, sciatica, and coccygodynia (3,4). Recent reports have described the computed tomographic and nuclear magnetic resonance imaging of sacral perineurial cysts (5–7). We had the opportunity of seeing and treating a patient with a symptomatic perineurial cyst. The case emphasizes the need for correlation between myelographic and CT examinations as well as the inclusion of perineurial cyst in the differential diagnosis of sciatica.

Case report

A 57-year-old woman presented to our clinic with a chief complaint of "sciatic nerve problem." The patient gave the history of typical right sciatic and low back pain of 18 months' duration. She also complained of pain in the perineal region and paresthesias in the sole of the right foot. The neurologic examination was normal and straight-leg-raising test was negative. A myelogram had been performed at another institution six months before her examination at our clinic. This was reported as being unremarkable (Fig 1). Her plain roentgenograms were negative except for mild degenerative changes. A CT scan of the lumbosacral spine revealed a soft tissue mass in the spinal canal at the S-1, S-2 level on the right. The patient had a repeat CT examination following the injection of metrizamide and no contrast was seen to enter the mass (Fig 2). An electromyogram of selected right lower extremity and lumbosacral paraspinous muscles was unremarkable.

The patient was taken to surgery where a sacral laminectomy was performed. The S-1 nerve root was identified. Adjacent to the S-1 nerve root was a large perineurial cyst arising from the S-2 nerve root. The S-3 nerve root was also exposed and was seen to be compressed by the cyst. The cyst was opened and drained of fluid. There was no evident communication with the subarachnoid space. Neural elements around the wall were dissected free and the wall of the cyst was then excised. The remaining dura was then closed over the neural elements. Following surgery, the patient reports marked improvement of her right leg pain. However, she still has intermittent paresthesias in the distribution of the sciatic nerve.

Discussion

This case illustrates that perineurial cysts can be symptomatic. The patient gave an excellent history of sciatic-type leg pain, and at surgery the S-1 nerve root was clearly compressed by the cyst. A sacral perineurial cyst should be included in the differential diagnosis of radicular leg pain. In this case, the patient had a normal neurologic examination, no mechanical signs, a negative electromyogram, and an unremarkable myelogram. Often, perineurial cysts do not fill with contrast at myelography (8). Had the investigation stopped at this point, the etiology of the patient's symptoms might not have been found. The importance of both the myelographic and CT examination in the investigation of

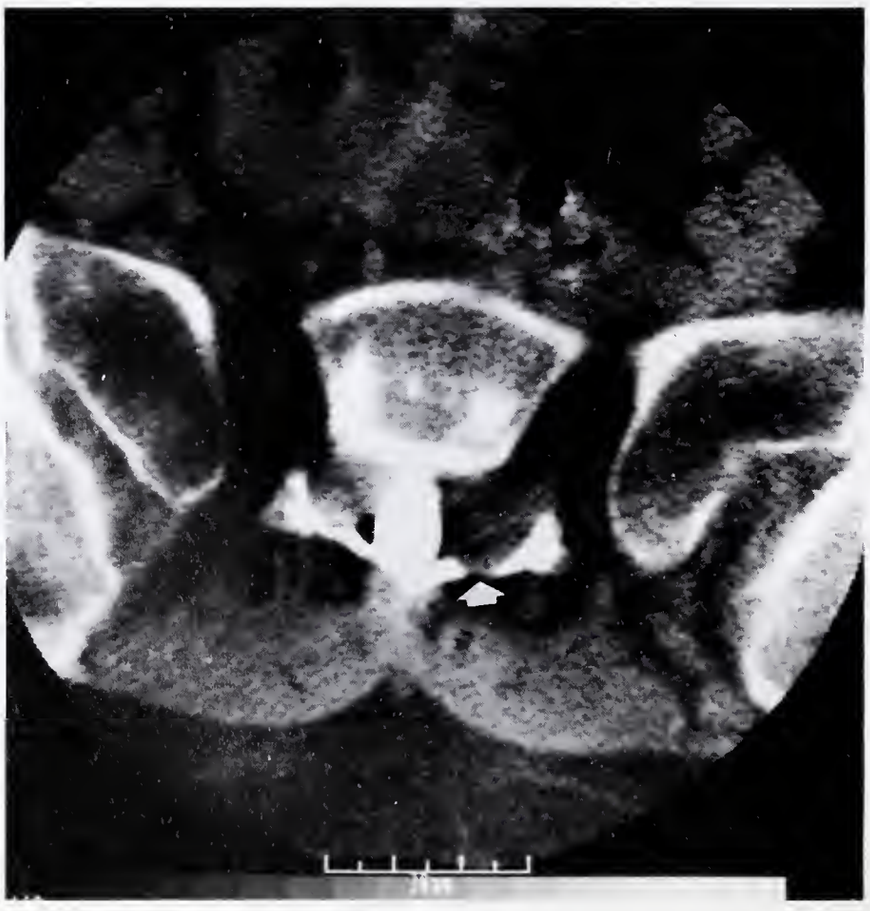
Dudley H. Davis, MD, Division of Neurologic Surgery; J. Terry Wilkinson, MD, Department of Neurology; A. Kent Teaford, MD, Department of Radiology; and Mitchell Smigiel, MD, Department of Surgery, Division of Neurologic Surgery, Scott and White Clinic, and Texas A&M University College of Medicine. Please send reprint requests to Dr Smigiel, Scott and White Clinic, 2401 S 31st St, Temple, TX 76508.

1. Myelogram showing no abnormality.

suspected lumbosacral root disease is emphasized. These two radiographic procedures are complementary studies and not simply duplication of effort.

REFERENCES

1. Tarlov IM: Perineurial cysts of the spinal nerve roots. Arch Neurol Psychiat 40:1067–1074, 1938.
2. Tarlov IM: Cysts (perineurial) of the sacral roots. JAMA 138:740–744, 1948.
3. Ziegler DK, Batnitzky S: Coccygodynia caused by a perineurial cyst. Neurology 34(6):829–830, 1984.
4. Nishiura I, Koyama T, Handa J: Intrasacral perineurial cyst. Surg Neurol 23(3):265–269, 1985.
5. Rodziewicz GS, Kaufman B, Spetzler RF: Diagnosis of sacral perineurial cysts by nuclear magnetic resonance. Surg Neurol 22(1):50–52, 1984.
6. Siqueira EB, Schaffer L, Kranzler LI, et al: CT characteristics of sacral perineurial cysts. J Neurosurg 61(3): 596–598, 1984.
7. Willinsky RA, Fazl M: Computed tomography of a sacral perineurial cyst. J Comput Assist Tomogr 9(3):599–601, 1985.
8. Tarlov IM: Spinal perineurial and meningeal cysts. J Neurol Neurosurg Psychiatry 33:833–843, 1970.



2. The CT scan following injection of metrizamide shows a cyst eroding the lamina of the sacrum on the right (arrow) and a small cyst on the left side. Note that contrast did not enter the cyst on the right side.

CONFIRMED

CONFIRMED BY CLINICAL EVIDENCE

ZANTAC® 150 h.s.

ranitidine HCl/Glaxo 150 mg tablets

EFFECTIVE MAINTENANCE THERAPY

for healed duodenal ulcer patients

CONFIRMED

In two randomized, double-blind, and well-controlled clinical trials, ZANTAC 150 mg h.s. significantly superior to cimetidine 400 mg h.s. for maintenance therapy in healed duodenal ulcers.

Percent of patients with observed duodenal ulcer recurrence

		0-4 months	0-8 months	0-12 months	No. patients
USA[1]	ranitidine 150 mg h.s.	9%	14%*	16%†	60
	cimetidine 400 mg h.s.	23%	34%	43%	66
UK, Ireland, Australia[2]	ranitidine 150 mg h.s.	8%‡	14%‡	23%‡	243
	cimetidine 400 mg h.s.	21%	34%	37%	241

*p=0.02
†p=0.01
‡p≤0.004
%=life-table estimates
All patients were permitted prn antacids for relief of pain.

These two trials used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Convenient once-a-night dose with a

low incidence of side effects[3]

Headache, sometimes severe, seems to be related to ranitidine administration. Other side effects have been reported; for a complete listing, see the **ADVERSE REACTIONS** section in the Brief Summary.

No significant interference with the hepatic cytochrome

P-450 enzyme system at recommended doses

ZANTAC 150 mg has no significant drug interactions with theophylline, phenytoin, or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications that decrease gastric acidity are administered.

Zantac® 150

ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime
for maintenance

See next page for references and
Brief Summary of Product Information.

Glaxo / ROCHE®

CONFIRMED

Zantac® 150

ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime for maintenance therapy in healed duodenal ulcer patients

References:

1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastroenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bardhan KD, et al: Ranitidine and cimetidine in prevention of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.
3. Data available on request, Glaxo Inc.

ZANTAC® 150 Tablets
(ranitidine hydrochloride)
ZANTAC® 300 Tablets
(ranitidine hydrochloride)

BRIEF SUMMARY OF PRODUCT INFORMATION

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC® product labeling.

INDICATIONS AND USAGE: ZANTAC® is indicated in:

1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer.** Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD)**. Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix® may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC® administration. Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION. Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

© Copyright 1983, Glaxo Inc. All rights reserved. October 1986

Glaxo

Glaxo Inc.
Research Triangle Park, NC 27709

NEW
ONCE DAILY

ISOPTIN® SR*

(verapamil HCl/Knoll)

240 mg scored, sustained-release tablets

JAMES B.
38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

YOUR CONCERNS
Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
— Beta blockers may increase the likelihood of bronchospasm.

ALICE W.
65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS
She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
— Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.

THOMAS G.
70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS
Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
— Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.
42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS
Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN does not cause urinary urgency.
— Unlike either beta blockers or diuretics, ISOPTIN will not adversely affect his already seriously compromised lipid profile.
— Unlike with propranolol, fatigue and impotence are rarely reported.

Antihypertensive therapy you and your patients can live with

*A product of Knoll research.

© 1986, BASF K & F Corporation

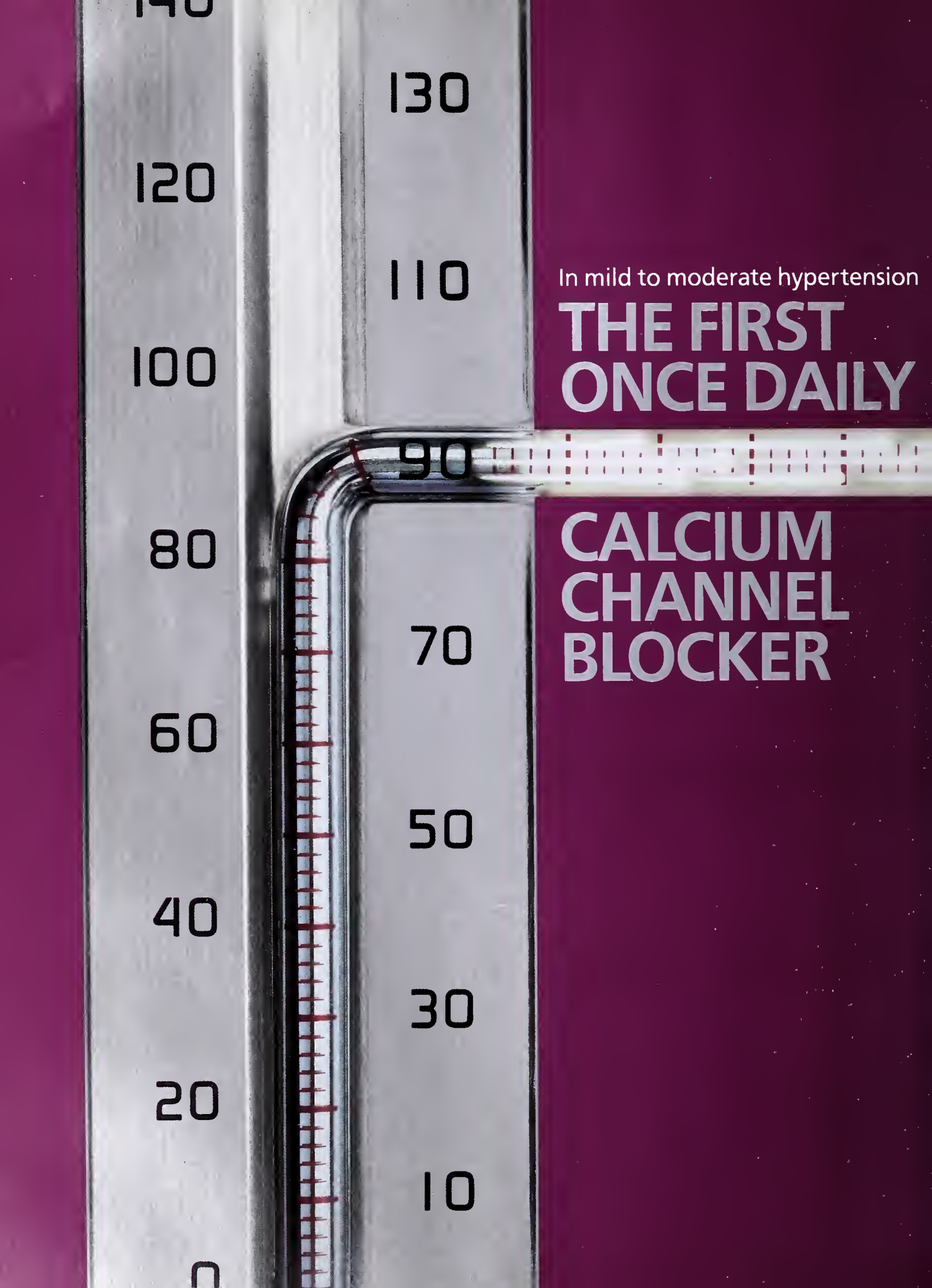
2538/1-87

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

knoll®

Printed in U.S.A.


130
120
110
100
90
80
70
60
50
40
30
20
10
In mild to moderate hypertension
THE FIRST
ONCE DAILY
CALCIUM
CHANNEL
BLOCKER

In mild to moderate hypertension

Brief Summary

THE FIRST ONCE DAILY CALCIUM CHANNEL BLOCKER

ISOPTIN® SR (verapamil HCl/Knoll) 240 mg scored, sustained-release tablets

CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS), 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock, 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. Hypotension: ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. Elevated Liver Enzymes: Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. Accessory Bypass Tract (Wolff-Parkinson-White): Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. Atrioventricular Block: The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. Digitalis: Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. Antihypertensive Agents: Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. Quinidine: In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. Nitrates: The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. Cimetidine: Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. Anesthetic Agents: Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. Carbamazepine: Verapamil may increase carbamazepine concentrations during combined therapy. Rifampin: Therapy with rifampin may markedly reduce oral verapamil bioavailability. Lithium: Verapamil may lower lithium levels in patient on chronic oral lithium therapy. Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. Pregnancy (Category C): There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. Nursing Mothers: ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. Pediatric Use: Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

knoll®

BASF Group

©1986, BASF K&F Corporation

2474/11/86

Printed in U.S.A.

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

api

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

CHARLES E. BEGLEY, PHD

HARDY D. LOE, JR, MD, MPH

The Texas indigent health care initiative: overview and issues

Charles E. Begley, PhD, Hardy D. Loe, Jr, MD, MPH, School of Public Health, The University of Texas Health Science Center, Texas Medical Center, Houston, TX 77030. Send reprint requests to Dr Begley.

The 69th Texas Legislature passed several new laws designed to expand health care services to the medically indigent. This paper provides an overview of the growing problem of medical indigency in the United States and Texas, describes the basic features of the Texas Indigent Health Care Initiative, and discusses some issues concerning its implementation and evaluation.

Health care for the medically indigent (people who need medical care but are uninsured and unable to pay) is a growing problem in Texas and many other states. The Intergovernmental Health Policy Project reports that, in 1984, 22 states introduced some kind of indigent health care legislation and, in 1985, 30 states considered such legislation (1). Most of the legislative action either mandated expansions in state- or county-subsidized health care programs for the medically indigent or established a commission to study the issue (2). Four states, including Texas, adopted legislation creating new state indigent health care systems.

There are a number of reasons for public concern with the medically indigent. Federal and state cutbacks in health care financing programs for the poor occurring simultaneously with the economic recession of 1981–1982 has led to an increase in the number of uninsured persons. The proportion of the nation's poor covered by Medicaid has declined since the mid-1970s. In 1975, 63% of persons living in families with incomes below poverty level were eligible for Medicaid. Since then the percentage has fallen, reaching 46% in 1985 (3). It is estimated that the total number of Americans without health insurance has grown from about 29 million in 1979 to about 33 million today (4). While many of the uninsured are poor and unemployed, many are working people whose employers offer little or no health insurance to their employees (5).

The Texas Department of Human Services (TDHS) estimated that about 1.7 million Texans had no public or private health insurance in 1981, representing about 12% of the total population. These figures rose to 2.7 million and 17%, respectively, by 1985, with the increase attributable to rising unemployment associated with the oil and gas recession. The lack of insurance is most prevalent among the state's poorest population. The 1981 TDHS study found that 28% of persons with incomes below poverty (727,000 persons) were without any form of health insurance. More recent TDHS figures indicate that this percentage increased to 43%, or 1.2 million people (6).

One reason Texas' poverty population lacks health insurance is because of the state's limited Medicaid program. Eligibility for Medicaid is determined on the basis of two basic criteria: income, which has been set at about 25% of the federally defined poverty level, and categorical requirements, which until recently included only the aged, disabled, or single-parent households with children. As a result of this restrictive eligibility policy, Texas ranks among the lowest in the nation in Medicaid benefits, covering only about 25% of the state's poverty population (7).

Another cause for concern is the changing conditions in medical economics that are making it harder for providers to pass on the cost of caring for those who cannot pay. One of these changes is the trend towards prospective payment for hospital care, which pays hospitals fixed sums per patient day, per admission, or, in the case of Medicare, per patient diagnosis. The Medicare payment changes combined with Medicaid cutbacks have reduced the pool of public dollars available for indigent care. In the past, hospitals have compensated for government cutbacks and continued to provide indigent care by shifting unpaid charges to privately insured patients. This practice has become less tenable, however, as private payers, following the government's lead, have pursued their own cost-containment efforts. These efforts have in turn compromised hospitals' ability to care for the nonpaying or partially paying patient.

The problem has been particularly acute in Texas, in part because the Texas Medicaid program covers such a small percentage of indigents, and also because most indigent care is provided by a small number of public hospitals located in major metropolitan areas. The Texas Hospital Association reported that, in 1983, 12% of total patient charges in Texas hospitals were unpaid (amounting to more than $1 billion), whereas the national average was only about 6% (8). About 80% of all the care provided to indigent patients in the state was in seven public hospitals (9). These hospitals received over $370 million in local tax support toward payment of their uncollected bills, an amount which exceeded the statewide Medicaid hospital care budget for 1983 by almost 10% (10).

The 69th session of the Texas Legislature responded to the problem by passing several pieces of legislation aimed at expanding funding for medical services to the indigent and distributing the burden of providing indigent health care more equitably. The remainder of this paper describes the background leading to the passage of the legislation, highlights some of the new programs and program expansions that were mandated, and explores some issues in program implementation and potential impact.

Background to the legislation

The historical concern with indigent health care in Texas has focused on the problems of public hospitals and local taxpayers. To understand this concern, one must go back to the Texas Constitution, which obligates Texas counties to provide support for "paupers," a provision interpreted by the courts to include medical care services. Because that obligation is vaguely defined, there has always been a lack of uniformity in county-supported services for the indigent. As a result, indigent residents of counties that offer more limited public services, ie, have no public hospitals or public health clinics, often go outside their counties of residence to acquire health care. With the out-of-county migration of indigents for medical care, taxpayers in areas that support a public hospital or clinic subsidize services provided to residents from other tax jurisdictions.

This issue became more visible when some public hospitals turned to the courts to secure compensation from the counties of indigent residents that the hospitals served. Success in that arena raised the prospect of a restructuring of the Texas indigent health care system based upon appeals to federal courts. These financial disputes also contributed to a growing awareness that there were serious gaps in the availability of health care to indigents across the state.

Thus, two policy issues set the stage for the actions of the 69th Texas Legislature. There was a perceived need for greater equity in the distribution of responsibility for health care of the indigent population, and there appeared to be serious gaps in access to and the availability of essential services for many indigent people. To clarify these two issues and recommend solutions, the Task Force on Indigent Health Care was appointed jointly by the Governor, Lieutenant Governor and Speaker of the House in September 1983. The task force was composed of 71 members, representative of most of the agencies, institutions, provider groups, elected officials, and consumers that make up the indigent health care delivery system. Its charge was to address four issues regarding indigent health care: criteria for defining indigency, types of needed services, organizational structure of a statewide program, and methods of financing. The major findings and recommendations of the task force were (11):

1. There is no uniformity in the eligibility criteria used by providers who serve the indigent. In some areas of the state, public services are available to individuals with incomes up to 140% of the federally defined poverty level, while in other areas providers require an individual to be completely destitute before any assistance is provided. This ambiguity contributes to geographic variation in the availability of health care services for indigents as well as variation in financing among area residents. A Task Force survey indicated that in some counties with relatively restrictive eligibility requirements, almost no public spending was allocated for indigent health care while other areas spent $35 to $40 per taxpayer to support health care programs for the poor. The Task Force made specific recommendations regarding the adoption of standardized eligibility criteria. These are discussed in detail in the next section.

2. With regard to the type of services needed by indigents, public testimony highlighted the critical lack of prenatal and delivery services for indigent pregnant women in Texas, as well as ambulatory primary care services for the general indigent population. It was reported that there were 90,000 births in Texas in 1983 to women living below the federal poverty level, and 50,000 of the mothers received incomplete, inadequate, or no prenatal care. Only 17% of the births were reimbursed by Medicaid. The need for primary care services was based on evidence concerning the poor distribution of physicians throughout the state and an indication that there are several counties that do not have a practicing physician willing to serve indigents. The task force argued that prenatal, delivery, and primary care services would save lives as well as dollars by reducing delivery-related complications, long hospital stays, and use of hospital emergency rooms for nonemergency conditions.

3. While recognizing the limitations of the local property tax base for financing indigent health care, the task force recommended that the historical role of county government in financing medical care for the poor be maintained and standardized for all counties. The task force also recommended that the traditional indigent care roles of the Texas Department of Health and Texas Department of Human Services should be retained and expanded and that emphasis be placed on giving indigents greater access to existing private providers as opposed to expanding public facilities and services.

4. Finally, the task force found a lack of available information for assessing the type and level of need for different health care services and for monitoring efforts that serve those needs. They concluded that statewide and regional planning and coordination efforts were restricted by the limited information available. The findings and recommendations of the Task Force were influential in the framing of individual bills and in the final passage of the legislative package.

Highlights of the indigent health care initiative

The major statutes that collectively comprise the package of indigent health care legislation include the following:

1. The Indigent Health Care and Treatment Act (Senate Bill 1, VACS, Article 4438f).

2. The Maternal and Infant Health Improvement Act (House Bill 1023, VACS, Article 4447y).
3. The Texas Primary Health Care Services Act (House Bill 1944, VACS, Article 4438d).
4. The Hospital Transfer Amendments Act (House Bill 1963, VACS, Article 4437f).
5. The Omnibus Hunger Act (Senate Bill 526, VTCA, Hum R 33).
6. The Hospital Reporting Requirements Act (House Bill 2091, VACS, Article 4438e).

In addition to this legislation, some important expansions were legislated in the Texas Medicaid Program in 1984 and 1985. In October 1984, as a result of changes in eligibility requirements mandated at the federal level, TDHS, which administers the Texas Medicaid program, extended Medicaid coverage to pregnant women and to children in intact families. Prior to that change, women had to have delivered their babies before becoming eligible and children had to reside in single-parent households. In January 1985, TDHS also added coverage for pregnant women and children (younger than 18) in intact households whose family incomes were above the AFDC income standard, but with sufficient medical expenses to reduce their net income after medical expenses to below the standard (the Medically Needy program). These expansions in Medicaid coverage, together with the new legislation, have become known collectively as the Texas Indigent Health Care Initiative.

Whereas other states rely heavily on their statewide Medicaid programs, provide direct state appropriations to major providers of indigent care, or use hospital rate setting to subsidize indigent care providers, the Texas Indigent Health Care Initiative seeks to build upon the locally-based indigent care system already in place (12). The legislation defines, for the first time, county government responsibilities for indigent care and requires local public hospitals to maintain 1985 eligibility standards and levels of service for the indigent. It expands the statewide Medicaid program for women and children and creates new state programs in maternal and infant health and primary care. The following paragraphs briefly describe each new program and/or program expansion created by the legislation.

Indigent Health Care and Treatment Act (county bill)

This law, which became effective Sept 1, 1986, defines and limits the indigent health care responsibilities of city and county governments. The law specifies that counties without a public hospital, hospital district, or hospital authority must provide a specified range of medical services to county residents who meet AFDC income and resource guidelines but do not meet the categorical requirements for Medicaid eligibility. For the most part, those eligible will be males and non-pregnant females between the ages of 18 and 65. Residents who are not legally admitted aliens also are covered by this bill. The range of required services includes inpatient and outpatient hospital care, diagnostic services, physician services, drugs, family planning, and skilled nursing care services.

The law also limits a county's overall financial liability for indigent health care to 10% of the county's general revenue tax levy and defines case limits of $30,000 per year, or 30 days of hospitalization per year, or 30 days of skilled nursing care per year, whichever is reached first. Counties which go over the limits are eligible for state reimbursement of 80% of expenditures.

The law requires counties and cities with a public hospital, hospital district, or hospital authority to either maintain current eligibility and service standards or adopt the same standards required of counties without public hospitals, whichever is higher. The county or city must provide sufficient financial support to the hospital to meet its indigent care obligations and if the hospital is sold, the standards must be maintained by the new owners.

It is estimated that the 125 counties in the state that currently do not have a public hospital, hospital district, or hospital authority will spend $20 million to $25 million in the 1986–1987 biennium as a result of this law. Approximately 90,000 people who do not qualify for other federal or state programs will be eligible (13).

Maternal and Infant Health Improvement Act (MIHIA)

This legislation expands maternity and infant health services for women with incomes below the poverty level who are not eligible for Medicaid and without other third-party resources. Services are to include prenatal care and delivery services to high-risk pregnant women, neonatal intensive care, and pediatric care for infants. The Texas Department of Health (TDH) was appropriated $22.2 million for this program for the biennium and is expected to provide care for about 17,000 pregnancies per year. Service contracts have been awarded by TDH on a competitive grant basis to 35 contractors. TDH regional offices will provide services directly or serve as fiscal intermediary in six areas of the state where no primary contractors were identified. More than $20 million was awarded for the care of high-risk pregnant women in keeping with the priorities of the program. In addition, approximately $1 million was allocated for prenatal care in counties where such care was not previously available, $800,000 was provided to continue maternity services covered by federal funds no longer available, and about $100,000 was awarded for health promotion and health education. The contractors represent a wide

range of health care providers including councils of government as umbrella organizations, medical schools, community health centers, a hospital district, a private hospital, a local health department, and a community action agency.

Texas Primary Health Care Services Act (primary care bill)

This statute gives TDH authority to provide primary health care in underserved areas of the state which also have high rates of poverty. Priority services authorized under the act include physician services, emergency health services, family planning, immunizations and other preventive health services, health education, and diagnostic services such as laboratory, radiology, and nuclear medicine. Individuals with incomes below 150% of poverty with no public or private health insurance are eligible. TDH awarded contracts through a competitive grant process to providers who showed promise of developing cost-effective systems of primary health care delivery. Seven projects totalling $2.4 million were awarded in June in the first round of submissions. The remaining $5.6 million was allocated by Aug 1. The funded providers are diverse. They include a health maintenance organization, a public health district, a neighborhood health center, a local health department, and a private hospital, among others.

Hospital Transfer Amendments Act (transfer bill)

This bill is aimed at eliminating transfers of emergency patients between hospitals for nonmedical reasons—the so-called "dumping" problem. It requires that TDH establish standards governing patient transfers between hospitals and that hospitals develop their own transfer policies in accordance with the TDH standards. Total state appropriation for the biennium is $80,000. The TDH standards were issued in February 1986, and individual hospital policies were due April 1.

Omnibus Hunger Act (hunger bill)

Under this act, food and nutrition services for the indigent were expanded in three separate programs:

1. For the first time TDH was appropriated state funds for nutrition services for the US Department of Agriculture Special Supplemental Food Program for Women, Infants and Children (WIC). These funds are to reach currently unserved or underserved areas of the state. Seven million dollars were appropriated by the state for the biennium, in addition to a federal allocation of approximately $100 million.

2. The Texas Department of Aging is authorized to provide home-delivered meals to the homebound elderly and disabled. The funds are to be used for meal costs rather than administrative costs, and local match of 15% is required. Two and a half million dollars was appropriated for this program.

3. An emergency food assistance program is to be administered by TDHS for referral services, training for volunteers to assist the elderly with food stamp applications, and an authorization to allow food banks to buy surplus state materials. One and a half million dollars was appropriated for this program. Participating counties must provide a 50% match.

Medicaid expansions

As discussed earlier, these expansions allow previously ineligible pregnant women and children to receive Medicaid services. TDHS estimates that spending for the expansions will be about $80 million in fiscal year 1986 and $90 million in fiscal year 1987. An additional $6 million was allocated to TDHS to provide financial assistance to hospitals providing relatively high amounts of care to indigents ("disproportionate share hospitals").

The total estimated increment in spending for the various components of the initiative is approximately $245 million for the biennium. This figure includes federal spending of about $150 million, state spending of $70 million, and local spending of $25 million. This compares to total current Medicaid expenditures of approximately $1.5 billion per year. Thus, the initiative provides a relatively small but significant increase in new dollars for indigent health care in the state. Moreover, it establishes a comprehensive blueprint for addressing the problem of medical indigency. Fig 1 lists the new and expanded programs called for under the legislation, their effective dates of implementation, and the groups to whom coverage is extended.

Adult males and non-pregnant females with incomes below AFDC payment levels are to be cov-

1. Texas Indigent Health Care Initiative: effective dates and coverage.

Program	Effective Date	Coverage
Medicaid expansion	Oct 1, 1984	First-time pregnant women; children and pregnant women in intact families who meet AFDC income and resource guidelines
	Jan 1, 1985	Pregnant women and children (18 or under) who are medically needy
Disproportionate share	Not specified	Hospitals providing large amount of indigent care
Hunger bill	June 1, 1985	Expansion of food subsidies to elderly, women, infants, and children not currently covered
Hospital transfer bill	April 1, 1986	New standards for hospital transfers of emergency patients
MIHIA	July 1, 1986	Prenatal and postnatal care for indigent women and children not eligible for Medicaid
Primary care bill	July 1, 1986	Preventive and primary medical services to non-Medicaid poor living in medically underserved areas
County bill	Sept 1, 1986	Basic medical coverage for county residents with incomes below AFDC but who do not qualify for Medicaid

ered by county programs if they live in areas not served by public hospitals. If they reside in counties with public hospitals, hospital authorities, or hospital districts they are entitled to the services provided by these systems. Pregnant women and children with incomes below AFDC levels will be covered by Medicaid. If their incomes are slightly above AFDC levels, but insufficient to cover medical expenses, they will qualify for the Medically Needy program. Finally, a limited number of poor and near-poor individuals will receive services through the new programs in maternal and infant health, primary care, and WIC. The legislation creates the possibility that all families and individuals from the lowest income strata will have access to selected preventive, primary care, and hospital care services. Access to prenatal and pediatric care for mothers and infants should be especially enhanced.

Implementation and evaluation issues

The Texas Legislature approved the appropriation for the Indigent Health Care Initiative in special session by a majority of a single vote. Some of the programs are controversial and the system as a whole is regarded as an experiment in terms of a state strategy for addressing the indigent health care problem. A major issue concerns the implementation of a highly complex set of programs in which responsibilities for indigent health care are distributed among a variety of state and local agencies and providers. While the legislation is fairly specific in defining what those responsibilities are, the implementing agencies and providers have considerable discretion in designing programs, determining eligibility, and delivering services. Effective implementation of the legislation is dependent on the resolution of two major issues. First, appropriate service, payment, and eligibility systems must be established by the county, MIHIA, and primary care programs. Indications are that most counties developed their systems prior to the start-up date of Sept 1, but some waited until patients appeared on their doorsteps or providers began submitting bills before they got organized. TDHS is mandated to assist counties in the development of these administrative systems but each county must develop its own capability, as must each newly funded MIHIA and Primary Care program. There was little incentive for counties to develop these systems prior to Sept 1 since Senate Bill 1 appropriated no money for administration.

Second, coordination mechanisms need to be developed to ensure that the various state and local programs complement each other in terms of population served and services covered. In order for the different programs to perform effectively as an indigent care network, each agency and/or provider must focus on those individuals and services for which it is responsible. For example, counties must identify persons not eligible for Medicaid or for public hospital services. Primary Care and MIHIA programs must also serve non-Medicaid eligibles. They must provide services that are not available through county or public hospital systems and/or they must serve persons who are not eligible for public hospital services. In most communities at the present time there is little coordination among the various indigent care providers. The legislation requires that coordination begin to occur. A major effort in this respect is an integrated eligibility system being developed by TDHS.

While these implementation issues are important in the short run, future continuation, modification, or expansion of the programs will depend upon the realization of long-range expectations of the legislation such as improvements in access to services for the indigent population and greater equity in the distribution of indigent health care costs. Although it is clear that the legislation is intended to expand access to health care for the uninsured, it is estimated that the state Medicaid program will still reach only about 30% of the poverty population after the expansions. Therefore, even if the MIHIA, Primary Care, and county programs are successfully implemented, the lack of insurance coverage will continue to be a problem for many poor people in the state, for certain providers, and for policymakers. Nevertheless, some improvements in access should be discernible, particularly for high-risk pregnant women and children.

The new indigent health care legislation is also clearly intended to achieve greater equity in the distribution of the cost of providing indigent health care. At the present time, there are four major sources of payment for indigent health care in Texas: Medicaid, financed with federal and state tax funds; other federal, state, and local tax-supported programs such as local public hospitals and clinics; private philanthropy; and hospital shifting of unpaid charges to private health insurers. Some redistribution of costs among these sources should occur as a result of the initiative. For example, additional federal funds will be spent on the expansion of the Medicaid program. State funds will increase through the MIHIA and Primary Care programs, the state portion of the Medicaid expansions, and the disproportionate share subsidies to hospitals and to counties which spend more than 10% of their tax base on indigent health care. Counties without a public hospital or hospital district will increase spending on medically indigent adults. Finally, public and private hospitals may or may not increase the amount of uncompensated costs they shift to private payers, depending upon the extent to which the new state, federal, and county revenues contribute to new services or provide payment for services

that hospitals provided in the past.

Unfortunately, at the present time, there are no good estimates of the amount of indigent health care cost borne by each of these sources. More detailed data will be collected from hospitals as part of the Cooperative Hospital Survey begun in fiscal year 1984 (14). There needs to be some agreement on the variables that will be used to measure the contribution to indigent health care by hospitals and other providers so that observed changes in the magnitude of these variables could be used to evaluate the effects of the legislation. Again, major changes are not expected to occur, given the limited funding of the program. Nevertheless, some redistribution of costs may be seen among counties, between counties and public hospitals, and between hospitals of all types and the Medicaid program.

Another long-range expectation concerns the cost-effectiveness of the program. One of the arguments made by proponents of the legislation was the cost-savings potential of providing preventive and primary care services to disadvantaged women and children. For example, the increased availability of prenatal and delivery care services for high risk pregnancies is expected to reduce the demand for neonatal intensive care and rehabilitation of handicapped children. Further, the availability of primary care is supposed to reduce overall hospital use. Although there is some strong evidence in the health services research literature to support these expectations, their realization in this instance will depend upon the implementation experience and other behavioral and environmental factors.

Conclusion

With the passage of the indigent health care legislation, the 69th session of the Texas Legislature created a comprehensive structure for the provision of services to the medically indigent. Proponents view the new legislation as a dramatic step forward for Texas in providing health care services for its indigent and uninsured residents, and a mechanism for reducing costs related to unnecessary complications of illness. Opponents view it as heavily bureaucratic and fiscally irresponsible in light of the state's current economic problems and in light of future spending increases that may be required to fulfill the programs' mandates. The success or failure of the legislation will depend not only upon how the various provisions are implemented but also on factors outside the control of the state, such as further reductions in federal support for health programs and the precipitous fall in oil prices.

It is important that the implementation and effects of these programs be carefully monitored and documented to determine if the kinds of services which are needed are delivered, if they are made available to those who would benefit the most from them, and if expectations of cost-effectiveness are realized. As reductions occur in the federal role, both for health care financing and planning, Texas and other states are likely to continue exploring various alternatives in the indigent health care area. The documentation and assessment of the Texas Indigent Health Care Initiative in defining responsibility for this expanded role, developing the administrative experience for management and implementation, and constructing a monitoring system should assist both this state and others in meeting their new responsibilities in an accountable and efficient manner.

REFERENCES

1. Intergovernmental Health Policy Project (IHPP), State Programs of Assistance for the Medically Indigent, Washington, DC, IHPP, 1984.
2. Intergovernmental Health Policy Project, State Programs of Assistance for the Medically Indigent, IHPP, Washington, DC, 1985.
3. Aiken LH, Blendon RJ: Access to medical care: trends and early warning signs. Internist 27(2):7–10, 1986.
4. Ibid.
5. Mulstein S: The uninsured and the financing of uncompensated care: scope, costs, and policy options. Inquiry 21(3):214–229, 1984.
6. These figures are based on results from the Biennial Survey conducted by the Texas Department of Human Services for 1981 and 1985.
7. Lanham L: Understanding the Texas Indigent Health Legislation: What It Means for Children and Their Families, Children's Defense Fund, Austin, Tex, 1985.
8. Communication from Karl L. Shaner, Vice President, Research and Information Services, Texas Hospital Association, Nov 15, 1985.
9. Indigent Health Care Task Force: Highlights of Hospital Survey Findings. Texas Department of Health, Austin, Tex, 1984.
10. The local tax support figure is based on communication from Karl L. Shaner, Texas Hospital Association. The Medicaid budget figure was obtained from Texas Department of Human Services, Texas Medicaid Expenditures: Fiscal Year 1984. Austin, Tex, April, 1985.
11. This material is based upon Task Force on Indigent Health Care: Final Report, Austin, Tex, December 1984, pp 2–3.
12. For a description of indigent care programs in other states see Intergovernmental Health Policy Project, State Programs of Assistance to the Medically Indigent. 1985, pp 21–41.
13. This estimate has increased by 20,000 since the legislation passed a year and a half ago.
14. The Texas Department of Health, Texas Hospital Association, and the American Hospital Association are jointly surveying hospitals on an annual basis. A portion of the survey asks for details concerning bad debt and charity care and their financial impacts.

CHARLES M. BALCH, MD

Cutaneous melanoma: a review of clinical management

Charles M. Balch, MD, Head, Division of Surgery, and Chairman, Department of General Surgery, The University of Texas M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston, TX 77030.

Melanoma is an especially important malignant disease for physicians to know about, since it can be cured with surgical treatment if diagnosed at an early stage. The typical melanoma is relatively thin (less than 1.5 mm), not ulcerated (except in 9% of cases), and does not invade into the reticular dermis or beyond (level IV or V). Melanomas are most commonly located on the trunk in men and on the lower extremities in women. Eighty-eight percent of the patients have no clinical evidence of metastases to regional nodes or to distant sites at the time of initial diagnosis. The treatment of melanoma consists of a wide excision of the melanoma as the initial form of treatment. This should include a 1- to 2-cm margin for thin lesions and a 3-cm margin for thicker ones. Elective regional node dissection should be considered for suspected micrometastases, especially for patients with a tumor thickness ranging from 1 to 4 mm. A national randomized surgical trial is now being conducted to directly compare alternative means of treatment.

The treatment of patients with advanced melanoma depends upon the number and site(s) of metastases. Surgery and radiation therapy should be considered for patients with limited disease while chemotherapy may be attempted for patients with disseminated metastatic melanoma, especially if it is symptomatic.

Although melanoma is an uncommon cancer, comprising only 1% to 3% of all malignancies, its incidence is increasing at a faster rate than almost any other cancer. In most epidemiological studies, the incidence of melanoma is doubling every six to ten years. Fortunately, the natural history of melanoma has changed in a favorable way during the past two decades, for the typical melanomas are thinner, less invasive, and more curable (1). A recent national survey of 4,545 melanoma patients treated during 1980 demonstrated that 87% of patients had clinically localized disease and 39% had very thin melanomas (less than 0.76 mm thickness), a size associated with a 95% (or greater) cure rate (2).

The typical melanoma patient has a fair complexion and a tendency to sunburn rather than tan, even after relatively brief exposure to sunlight (3). A patient with a melanoma has a 3% to 5% risk of developing a second primary melanoma and thus joins a high-risk group of patients who should be followed both for metastatic disease and for second primaries. Patients with familial melanomas or with the dysplastic nevus syndrome constitute identifiable high-risk groups (4).

Clinical diagnosis of melanoma

The cardinal feature observed in a skin lesion that proves to be a melanoma is a *change* observed over a period of weeks or months. These symptoms may include growth in the diameter or contour of a mole, a change in color, bleeding, itching, ulceration, the development of a palpable lymph node, or some combination thereof (5). Growth (ie, increased size) and color change are most commonly seen first, occurring in over 70% of early curable melanomas. Color change associated with tumor growth is most frequently a progressive darkening which especially increases as the nodular growth develops. Itching occurs less frequently as a symptom of melanoma, but its presence may draw the patient's attention to an otherwise unnoticed lesion. Bleeding is not an uncommon symptom of melanoma, but it can occur in more advanced lesions.

It is helpful to examine suspicious skin lesions under a bright light (tangential to the skin) to highlight distinctive coloration and surface changes of these lesions. Some of the typical features of cutaneous melanoma include: variegation in color; an irregular, raised surface; an irregular perimeter with indentations; ulceration of the surface epithelium; and crusting. These features are generally distinct from those seen in benign nevi. It should be emphasized that not all melanomas are pigmented.

Indications for biopsy

A biopsy should be performed whenever the suspected clinical diagnosis is melanoma. It should be emphasized that the features of the malignancy are usually more subtle when it is in a more curable stage. Melanomas have a variety of clinical appearances, but a common denominator is their changing nature. Therefore, any single pigmented lesion that undergoes *change* in size, contour, configuration, or color should be considered a melanoma, and a biopsy performed (Fig 1).

Preoperative evaluation

Metastatic melanoma can have a more variable clinical course than almost any other human cancer. Therefore, it is incumbent upon the physician who treats melanoma patients to understand the patterns of metastases and methods of evaluation for metastatic disease. They should blend a suitably comprehensive examination of each patient with cost-effectiveness. In the absence of symptoms or signs of metastases, a minimum number of laboratory and radiological tests should be ordered, since their cost adds further burden to the patient and his family, and the diagnostic yield is often small. Rather than order a battery of expensive tests, an initial screening appraisal should be performed first, and then the metastatic survey pursued on a more selective basis, depending upon the presence of signs or symptoms

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

of disease in a particular area (6). For example, bone, brain, and liver radioisotope scans are not indicated for routine screening of occult metastatic melanoma because their diagnostic yield is low. Finally, knowledge of prognostic factors and the natural history of disease will help the physician decide whether the probability of detecting metastases warrants a more or less comprehensive metastatic evaluation. These principles are also important postoperatively in deciding how long to follow the patient, the frequency of follow-up visits, and the type of screening tests to be used.

Recommended tests for evaluating metastatic melanoma are listed in Fig 2. A complete history and physical examination is a most important part of the initial metastatic evaluation. It is a sensitive, specific, and cost-effective means of evaluating possible metastatic disease. An isolated instance of elevated serum alkaline phosphatase or lactic dehydrogenase is presumptive evidence of metastatic disease, especially if it resides in the liver (7). A chest roentgenogram should routinely be used for screening purposes. Whole lung tomograms or computed tomography scans of the chest are useful for evaluating suspected pulmonary, pleural, or mediastinal metastases. Computerized tomography is the most accurate and localizing test for detecting suspected brain and liver metastases, whereas a bone scan is indicated when bony metastases are suspected.

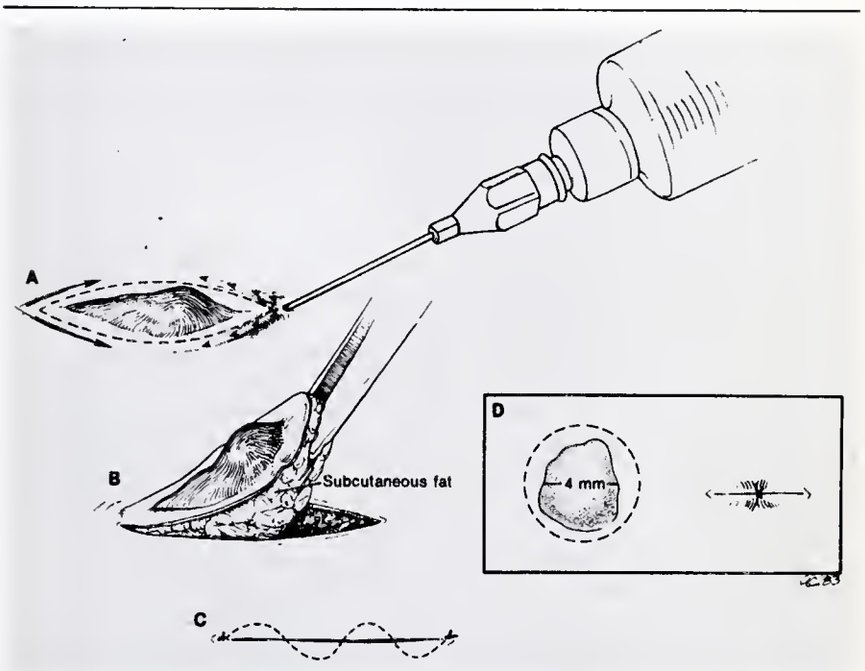
Melanoma can metastasize to virtually any organ or tissue. Nevertheless, there are certain patterns of metastases for melanoma that will help the clinician focus on those sites most likely to harbor metastatic disease. The most common sites of metastases are the regional lymph nodes. The most common first sites of distant metastases are the skin, subcutaneous tissue, and lung (8). The liver, bone, and brain are also common sites of first relapse.

Operative management of the primary melanoma

Local excision of a primary melanoma consists of a wide excision of the tumor or the biopsy site with a margin of normal-appearing skin. In our practice, the surgical margins are adjusted according to the measured tumor thickness, since this factor correlates best with the risk for local recurrences.

The earliest lesion is a melanoma *in situ*. Although the natural history of these noninvasive lesions is not completely understood, there is a risk of local recurrence (either as an *in situ* melanoma or an invasive melanoma) if they are not re-excised after biopsy. It is therefore recommended that the biopsy site of an *in situ* melanoma be excised, usually with a 0.5- to 1-cm margin of skin.

For thin melanomas (measuring less than 0.76 mm in thickness), there is only a minimum risk of



1. Technique of excisional biopsy for melanoma. (A) The suspicious lesion is infiltrated with local anesthetic (bupivacaine hydrochloride ([Marcaine]) is preferred) elliptically around but not into the lesion itself. (B) The entire lesion is excised with a narrow rim (1–2 mm) of normal-appearing skin around it, including the underlying subcutaneous fat. Care is taken to avoid crushing the specimen with forceps. (C) The incision is closed after hemostatis is completed. This can be performed with simple interrupted nylon sutures (4–0 or 5–0). At the University of Alabama at Birmingham, the preferred technique is to approximate the subcutaneous tissues and then close the skin with an absorbable subcuticular suture such as polydioxanone suture (PDS) or polyglycolic acid (Dexon). (D) An alternative approach for small lesions. An excision with a 6-mm punch is a simple and expedient office procedure. The lesion is completely excised with the punch biopsy instrument, and the skin edges are closed with a single 4–0 nylon suture. (Reprinted with permission from Urist MM and Milton GW, Diagnosis of metastatic melanoma, In Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985.)

local recurrence in all reported patient series (9). A wide excision consisting of a 1 to 2 cm minimum margin of skin is recommended. This can be performed as a generous elliptical incision and a primary skin closure. In one study of 936 patients with melanomas less than 1.0 mm thick, there was not a single local recurrence, despite the fact that 61% of patients had conservative margins of excision (MS 2 cm) (9). For intermediate and thick melanomas (ie, those greater than 0.76 mm in thickness), a 3 cm margin is usually employed because of an increasing risk of local recurrence and satellitosis. This risk may exceed 10% for those melanomas over 4 mm thick. Often, even radical excisions can be closed with mobilization of skin flaps or with rotational advancement flaps (9). If this is not possible, a split thickness skin graft is used to cover the defect.

Lentigo maligna melanomas do not have to be widely excised since they have a low risk for recurrence (10). They generally occur on the face and neck and can be safely excised with a 1 cm margin of excision. Other types of melanomas located on the hands, face, and feet generally do not lend themselves to a wide surgical excision because of their anatomic location. In these circumstances, the surgeon must use his best judgment to excise the lesion as widely as possible within the anatomic constraints of surrounding structures. Melanomas of the ear are generally excised with a hemiauriculectomy or a wedge excision of the lesion. Melanomas arising beneath the fingernails (subungual melanomas) are generally treated with a digital amputation just below the distal interphalangeal joint.

The overall risk for local recurrence is extremely low, being around 3% of all patients. Those patients at high risk for local recurrence had one of the following tumor features: thickness of at least 4 mm (13% incidence), ulceration (11%), or location on the foot, hand, scalp, or face (5% to 12%) (11). Local recurrences usually develop within five years after primary melanoma excision, but sometimes as late as ten years.

2. Tests for evaluating metastatic melanoma

Metastatic Site	Symptoms	Initial Screening Studies	Confirmatory Studies (If Necessary)
Lung	Usually none (may have some dyspnea, cough, or hemoptysis)	Chest roentgenogram	Tomograms or CT scan
Liver	Weight loss, anorexia, upper abdominal pain	↑ AP ↑ LDH P_x: Liver mass or ascites	Liver sonar, abdominal CT scan (or liver scan if CT unavailable)
Skin, subcutaneous	New nodule	P_x examination	Biopsy
GI tract	Hematemesis, melena, obstruction, abdominal pain	P_x examination Stool guaiac	GI contrast roentgenograms, endoscopy
Brain	Headache, numbness, motor weakness	H_x and P_x examination	Brain CT scan (or brain scan if CT unavailable)
Bone	Localized pain	↑ AP	Bone scan, bone roentgenogram
Kidneys, bladder	Hematuria	Urinalysis	Intravenous pyelogram, cystoscopy

H_x: medical history
P_x: physical examination
AP: alkaline phosphatase
LDH: lactic dehydrogenase

(Reprinted with permission from Urist MM and Milton GW, Diagnosis of metastatic melanoma, in Balch CM and Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide, Philadelphia, J. B. Lippincott Co, 1985.)

Operative management of regional node metastases

Regional lymph nodes are the most frequent site of metastases. They may occur clinically as enlarged, firm lymph nodes, or as clinically occult, microscopic metastases in lymph nodes. These two settings require different types of clinical assessment and surgical judgment.

CLINICALLY ENLARGED NODAL METASTASES

In patients with clinically evident lymph node metastases, the treatment approach consists of a radical lymphadenectomy involving the regional lymph node basin. A partial lymph node dissection or simple excision of nodal metastases is insufficient treatment for patients with metastatic melanoma. In two thirds or more of these patients, metastatic disease is present in other lymph nodes. Since the surgeon's ability to detect nodal metastases by clinical criteria is not optimal, a philosophy of limited excision for only clinically detectable nodes will often compromise both the palliative and curative goals of surgical treatment.

For patients with demonstrable inguinal node metastases, a combined dissection of the iliac and femoral lymph nodes is recommended, because 25% to 50% of patients with femoral node metastases will have iliac nodal involvement as well (12). Excision of the obturator lymph nodes is important because they can also be involved by metastases (13). Although there is a risk of seromas, infection, or lymphedema, these can be minimized with proper surgical technique and postoperative management (13–15). Suction catheters, antibiotics, and prophylactic measures (elastic stockings, diuretics, and leg raising) are recommended to prevent edema.

For patients with axillary node metastases, a complete axillary lymphadenectomy is important, including the level III lymph nodes medial to the pectoralis minor muscle (16). The surgeon should remember that metastatic nodes may be present at the perimeters of a traditional axillary node dissection. Lymph nodes that might be missed include those along the posterior axillary line, the lower chest wall, and the long thoracic nerve. Suction catheter drainage and antibiotics are recommended. Mobilization of the arm is not encouraged during the first seven to ten days after surgery. Gradually over the ensuing four weeks, mobilization of the arm

is increased with active exercises. The complication rate for axillary lymph node dissection is quite low, the most frequent being a wound seroma (15).

Metastasis to cervical lymph nodes requires a radical neck dissection, sometimes including a superficial parotidectomy (16). The subgroup of lymph nodes incorporated into the surgical dissection depends upon the anatomical site of the primary melanoma. Those melanomas occurring anterior to the pinna of the ear generally produce nodal metastases to the parotid, submandibular, submental, upper jugular, and posterior triangle (spinal accessory, transverse cervical) lymph nodes. Lesions occurring inferior to the lateral commissure of the lip will usually spread to cervical lymph nodes rather than parotid nodes. Melanomas occurring on the scalp posterior to the pinna of the ear usually spread to occipital, postauricular, posterior triangle, or jugular chain nodes.

Parotid lymph node metastases may be extraglandular or intraglandular. The most common extraglandular metastases are located in the preauricular nodes and the nodes are within the substance of the parotid gland and are usually located superficial to the seventh cranial nerve. The parotid chain of nodes is contiguous with the cervical nodes, and for this reason it is generally advisable to combine neck dissection with parotid lymph node dissection when parotid nodes are involved by metastatic melanoma.

The postoperative management of the patient undergoing cervical or parotid lymphadenectomy consists of suction drainage and elevation of the head to minimize edema. Complications are infrequent, but may include seroma, skin slough, nerve dysfunction, or chylous leak (15).

MANAGEMENT OF CLINICALLY NORMAL REGIONAL LYMPH NODES

Decisions regarding management of suspected microscopic (or occult) metastases in regional lymph nodes are more difficult. The central question in this decision revolves around the timing of the operation to excise regional lymph nodes. The surgeon has two options. First, he can perform an elective (immediate) lymph node dissection (ELND) to remove suspected microscopic or clinically occult metastatic tumor. The second option would be to defer this procedure until any nodal metastases have grown sufficiently large for clinical detection by palpation. A therapeutic (delayed) regional node dissection is then performed.

The efficacy of ELND for melanoma is still controversial. Since it is clear that not all melanoma patients benefit from this procedure, the debate centers around whether a subgroup of patients can be identified with improved survival rates after elective lymphadenectomy compared with those for whom initial management of the lymph nodes is observation only (17).

Elective lymphadenectomy has the major theoretical advantage of definitive treatment given at a relatively early stage in the natural history of nodal metastases, when the tumor burden is generally less than several million cells. It has the disadvantage that some patients may be subjected to an operation when they do not have metastases in the lymph nodes. Conversely, the advantage of delayed lymphadenectomy is that only patients with demonstrable metastases undergo a major operation. It has a disadvantage in that treatment is delayed until the metastases are clinically palpable, when the tumor burden is much greater (ie, many billions of metastatic cells). As a consequence, the chances for cure are diminished. Among patients whose regional nodal metastases can be detected clinically, 70% to 85% will have distant micrometastases from which they will eventually die (18).

Since the cure rate for delayed lymph node dissection is so poor (ie, 25% survival at 10 years), many surgeons advocate immediate excision of the regional lymph nodes in selected patients to remove nodal micrometastases before they can disseminate (17). In this setting, the surgical decisions depend on knowing which prognostic factors can reliably identify those patients at risk for occult metastatic disease.

The measured tumor thickness of the melanoma provides a quantitative estimate of the risk for occult metastatic melanoma at regional and distant sites. In fact, melanoma thickness is the most important, but not the sole, guide for selecting patients who might benefit from ELND (19,20). The major advantages of using tumor thickness for these surgical decisions is that it can provide a quantitative estimate of the risk for occult metastatic melanoma in both regional and distant sites. Thus, *thin melanomas* (less than .76 mm) are associated with localized disease and a 95% or greater 10-year survival rate. An ELND would provide no therapeutic benefit in such patients. *Intermediate thickness melanomas* (0.76 to 4.0 mm) have an increasing risk (up to 60%) of harboring occult regional metastases, but a relatively low risk (less than 20%) of distant metastases. Patients with these lesions might therefore benefit from an ELND. *Thick melanonas* (greater than 4 mm) not only have a high risk of regional node micrometastases (greater than 60%), they also are associated with a high risk (greater than 70%) of occult distant metastases at time of the initial presentation. These patients often fare poorly, since the distant metastases in most instances would negate the curative potential of surgically excising micrometastases in the regional lymph nodes.

The anatomic site of the melanoma is also an im-

portant criterion in predicting the risk for regional node micrometastases. Patients with extremity melanomas have a more favorable outlook, whereas those with melanomas on the trunk or head and neck area have a higher risk of microscopic metastatic disease, even with equivalent tumor thicknesses (10). Extremity melanomas in women have the lowest biological potential for metastatic melanoma, lower than lesions of equivalent thickness of the extremities of men, whereas patients with melanomas located on the trunk or head and neck areas fare worse, regardless of sex. Finally, ulcerative melanomas have a higher risk for microscopic metastases than their nonulcerated counterparts, even when matched for other prognostic parameters, such as tumor thickness (21). The growth pattern is also important to consider in this decision-making process. Lentigo maligna melanomas have a low biological risk for metastases so an ELND is not recommended in these patients (10).

Tumor thickness thus should not be the sole criterion for making surgical treatment decisions. Other factors, such as the presence or absence of tumor ulceration, the growth pattern, the patient's sex and age, the anatomic location of the melanoma, and the operative risk should all be considered when making the decision to perform ELND in a particular patient.

Surgical judgments for melanomas located on the trunk have the added delineation from among several nodal basins at risk for harboring microscopic metastases. The sites of multidirectional lymphatic drainage on the trunk are much greater than previously appreciated. In these circumstances, a radionuclide cutaneous scan is an accurate and reproducible test for determining the lymphatic drainage (22).

With proper surgical judgment and technique, ELND can be performed in selected patients with minimum morbidity and virtually no mortality.

3. Common distant sites of metastatic melanoma

Site	Clinical Series (%)	Autopsy Series (%)
Skin, subcutaneous, and lymph node	42–59	50–75
Lung	18–36	79–87
Liver	14–20	54–77
Brain	12–20	36–54
Bone	11–17	23–49
Intestine	<1–7	26–58
Heart	<1	40–45
Pancreas	<1	38–53
Adrenals	<1	36–54
Kidney	<1	35–48
Thyroid	<1	25–39

(Reprinted with permission from Urist MM and Milton GW, Diagnosis of metastatic melanoma, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide, Philadelphia, J. B. Lippincott Co, 1985.)

Older patients and obese patients have an increased risk of developing wound complications (15). Some modifications of the lymphadenectomy can be considered to minimize the operative morbidity. Thus, when an ELND of the cervical nodes is planned, a modified neck dissection is usually performed. This modified procedure spares the spinal accessory nerve and decreases the morbidity of shoulder function. The sternomastoid muscle, but not the jugular vein, is also spared in most cases. Partial cervical dissections are generally not performed, since it is difficult to precisely define the pathways of nodal drainage to various parts of the neck. When ELND is planned for melanomas located on the arm or upper trunk, a standard radical axillary lymphadenectomy is performed. The postoperative morbidity is extremely low (less than 5%). In patients undergoing ELND for leg or lower trunk melanomas, generally only the femoral nodes are spared to minimize the risk of significant leg edema. However, an iliac node dissection is recommended if there are demonstrable metastases to the femoral nodes at the time of ELND. Using this approach, the long-term operative morbidity is quite low and is certainly at an acceptable level in patients with a life-threatening illness (Fig 3).

Results of several prospective but nonrandomized trials of ELND involving over 2,000 stage I melanoma patients treated at the University of Alabama in Birmingham, the University of Sydney, and the Duke Medical Center have demonstrated an improved survival rate in patients with intermediate thickness melanomas ranging from 0.76 to 4.0 mm (20,23). Patients with melanomas located on the trunk or head and neck have a higher risk for metastases than those with extremity melanomas. The results from the Alabama and Sydney data demonstrate an improved survival rate for these patients with axial melanomas—trunk, head, and neck—of intermediate thickness. For patients with extremity melanomas, the benefit of ELND was greater in men than women.

In contrast to these results, randomized prospective studies from the World Health Organization (WHO) Melanoma Group and from the Mayo Clinic did not show any improved survival for patients with extremity melanomas undergoing ELND compared with those whose initial management was wide local excision alone (Fig 4) (24,25). However, there are a number of criticisms made of these studies, and there is a suggestion that a small subgroup of patients in the WHO Melanoma Group study may have benefitted from ELND (17). Realizing that there is some inherent selection bias in nonrandomized clinical trials, on the one hand, and that there has not been complete acceptance of the randomized trials, on the other hand, a new randomized prospective analysis for intermediate

thickness melanomas at all sites has been activated by the cooperative cancer groups in the United States and Canada. In addition, a randomized prospective trial assessing ELND for trunk melanomas has been initiated by the WHO Melanoma Group.

Management of intransit metastases

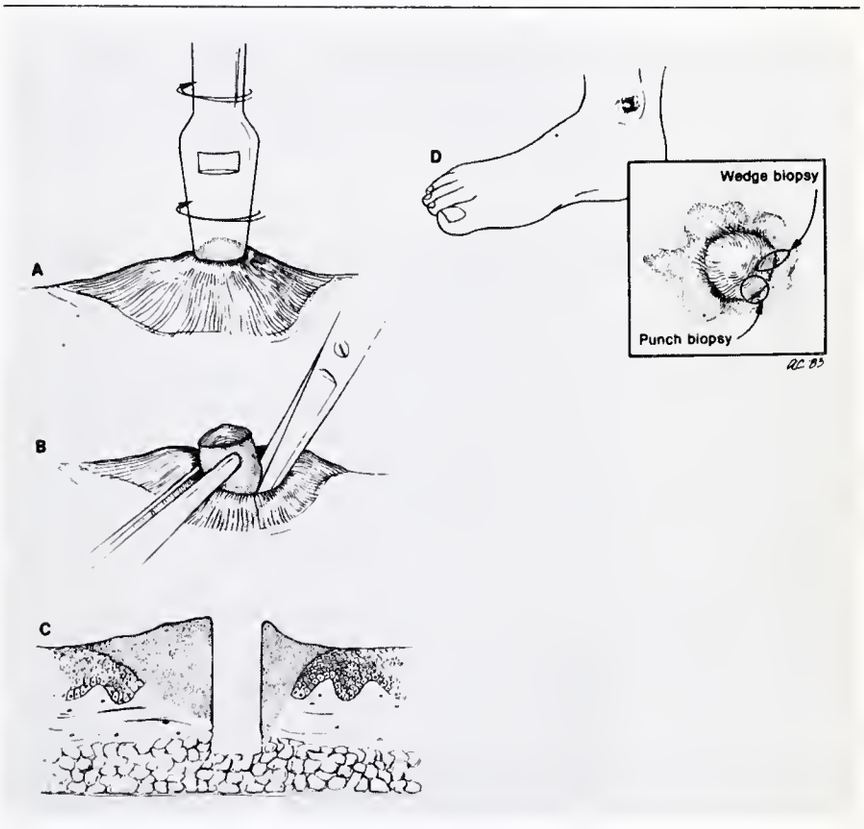
Intransit, or satellite metastases, are a regional form of metastases that arise in the lymphatics or soft tissue between the primary melanoma and the regional lymph nodes. Intransit metastases can have a heterogeneous set of clinical presentations, each with its own implication for survival (8). Those patients with a few intransit metastases have a better prognosis than those with multiple lesions. Intransit metastases located within the skin have a better prognosis than those in the subcutaneous tissues. Regional nodal metastases occur in about two thirds of these patients, and if present, are associated with a low survival rate. The actual incidence of intransit metastases in most series is about 2% to 3%.

The treatment for intransit metastases is not well standardized. Surgical excision may be considered for one or a few lesions. Isolated limb perfusion with regional chemotherapy and hyperthermia is probably the treatment of choice for most patients with intransit metastases involving an extremity (26). Radiation therapy can be an effective means of controlling intransit metastases and is used especially for multiple lesions involving the trunk or head and neck area. Intralesional immunotherapy using bacille Calmette-Guerin (BCG) or other agents, as well as cryosurgery, has been employed successfully in some instances. Systemic imidazole carboxamide (DTIC) chemotherapy (alone or in combination) offers little hope of success for controlling intransit metastases. Tumor growth can be temporarily arrested in occasional patients, but usually only for a few months.

The treatment approach for intransit metastases must thus be individualized, but some form of aggressive regional treatment is best. The long-term results of treatment are not good in most series: The majority of patients have later developed systemic metastases. The median survival rate ranges from 19 months to 42 months. The best long-term results occur in patients treated with isolated limb perfusion techniques (26).

Adjuvant therapy

A large number of clinical trials have so far been unable to prove the substantial benefit for any form of adjuvant therapy, including immunotherapy, chemotherapy, or radiation therapy. In general, therefore, these modalities should be used sparingly in postoperative patients, except for investigational trials. Clinical trials to date examining the benefit of adjuvant BCG or *Corynebacterium parvum*



4. Technique of punch biopsy. (A) The suspicious lesion is anesthetized around (but not within) the tumor. A 6-mm (or sometimes a 4-mm) biopsy punch is then placed over the most raised portion of the tumor, and a core of tissue is taken by rotating the punch. (B) The base of the core biopsy is then amputated with fine-tipped scissors. Care is taken to avoid crushing the specimen. (C) Cross-sectional drawing illustrating the proper depth of the biopsy to the underlying subcutaneous tissue so that the histologic diagnosis can be made and microstaging performed. The punch biopsy specimen usually (but not always) provides representative microstaging information when the most raised portion of the lesion is incorporated in the specimen. (D) An incisional biopsy should be performed for large lesions or in certain locations where the amount of skin removed is critical (eg, face, hands, or feet). The biopsy specimen can be obtained with a simple wedge incision using a scalpel or a punch. (Reprinted with permission from Urist MM and Milton GW: Diagnosis of metastatic melanoma, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985.)

immunotherapy, even when used with chemotherapy, have not shown any substantial benefit in any subgroup of patients postoperatively. To date, the results of adjuvant chemotherapy, active immunology, and interleukin-2 have been unsuccessful (17).

Follow-up

Melanoma patients should be examined at regular intervals to check for recurrent or metastatic disease. A recommended interval for routine metastatic examination is every three to four months for the first two years, every six months through the fifth year, and yearly thereafter. These intervals may be modified according to the risk of metastatic disease in any individual patient. The evaluation consists of a history and physical examination, chest roentgenogram, and alkaline phosphatase and lactic dehydrogenase determination (6).

Treatment of distant metastases

The treatment of a patient with advanced melanoma depends upon several factors, including the sites and number of metastases, the rate of growth, and previous treatment, and the age, overall condition, and desires of the patient. It is important to define the goals, risks, and benefits of treatment when assessing patients with advanced disease. The goals of treatment are: relief of symptoms if present, prolongation of life, and staging to determine subsequent treatment. Treatment directed at relieving symptoms is generally worthwhile, especially when the anticipated benefit of relieving symptoms exceeds the toxicity and risk of the treatment itself. In addition, the effectiveness of the treatment can be monitored by both subjective and objective assessments of the symptoms caused by the metastases.

The benefit-risk ratio must be even higher in the asymptomatic patient with distant metastases. The goal of treatment here is to prolong life, and it is important that the treatment itself does not severely limit the patient's quality of life. This is especially true for melanoma patients, since systemic control of disease cannot usually be achieved with currently available chemotherapy. Each treatment has its own set of risks, and the physician employing these treatments must thoroughly understand these potential risks as they apply to each individual patient setting (8). The treatment options are listed in Figs 5 and 6, and are summarized below.

NO TREATMENT

This is an important consideration, especially in the asymptomatic patient, those who are terminally ill, or those of advanced age. The surgeon may elect to observe some metastatic lesions if they are growing slowly and not causing symptoms. Quality of life is maintained in this instance, and treatment can be initiated later when the lesions begin to progress or the patient develops symptoms.

SURGERY

Surgery is a very effective palliative treatment for isolated metastases, especially since melanoma often metastasizes sequentially and effective chemotherapy is not presently available (8). Surgical excision of metastatic melanoma probably gives the patient the best, quickest, and most long-lasting palliation. On some occasions, the palliative effect is sustained for five to ten years. Surgery can therefore prevent symptoms from occurring, it can relieve symptoms, and it can prolong life. The obvious limitation of surgical excision is that it is a local form of treatment, and the patient will eventually succumb from

5 Treatment options for systemic metastatic melanoma

Treatment Option	General Indications	Possible Risks	Comments
Surgery	Superficial lesions Brain Symptomatic visceral Occasional lung	Anesthesia Infection Hemorrhage	Best for isolated lesions, especially symptomatic low risk
Radiation Therapy	Superficial lesions Brain Bone	Normal tissue injury	Dose fraction important, often very effective
Chemotherapy	Widespread disease Symptomatic lesions	Severe vomiting, marrow depression	Low activity for most drugs, widespread effect
Hyperthermia	Liver lesions Large superficial lesions	Normal tissue injury	An experimental treatment
Limb Perfusion	Local recurrences Intransit metastases Satellites	Muscle necrosis Skin burns Vascular thrombosis	Usually effective, restricted to extremity lesions, requires major surgery
Cryotherapy/diathermy	Skin and subcutaneous lesions	Poor wound healing	
Intralesional chemotherapy or immunotherapy	Skin and subcutaneous lesions	Tissue necrosis, fever, allergic reactions, generalized infectious disease	Can be locally effective in many lesions
Systemic immunotherapy	Nonvisceral lesions	Fever, allergic reactions	Little benefit so far; experimental treatment

metastatic disease elsewhere. Careful patient selection is therefore important. Surgery should be confined to situations involving accessible lesions that are limited in amount and to patients on which the operation can be safely performed. Some examples include isolated visceral metastases, especially brain, isolated lung metastasis, and symptomatic gastrointestinal metastases. Many lesions involving the skin, subcutaneous tissues, or distant lymph nodes are also amenable to this approach when they are limited in number and size.

RADIATION THERAPY

Radiation can be effective palliative treatment for patients with bone or brain metastases and for those with lesions located in the skin, subcutaneous tissues, or distant lymph nodes. Radiation with high-energy beams will relieve the bone from bony metastases, usually within one week. Cranial (whole brain) and spinal cord irradiation can be extremely effective for central nervous system metastases, especially when used with dexamethasone (eg, 16 to 24 mg per day in divided doses).

Irradiation can be extremely effective treatment for superficial metastatic disease in the skin or soft tissues where they can be treated with high-energy photon beams from a linear accelerator. The dose fraction schedule is important. One suggested dose fraction schedule is 600 rad given twice a week for three weeks.

CHEMOTHERAPY

There is a paucity of drugs available for treating systemic melanoma. DTIC is the only drug with significant activity in melanoma. The response rates are only 15% to 20% in most series, and the toxicity is high (especially with protracted vomiting). Nevertheless, in individual cases with measurable lesions, chemotherapy may be considered, especially in symptomatic patients. If there is not a dramatic response after two courses of chemotherapy, it can be discontinued or another drug combination evaluated. In general, nonvisceral metastases respond better to DTIC chemotherapy combinations than do visceral metastases. Often, chemotherapy is used only in patients whose lesions are not amenable to surgery or radiation therapy, and only sparingly in asymptomatic patients.

Summary

Some of the most salient principles involving the management of cutaneous melanoma are listed in the following seven paragraphs.

1. Any cutaneous lesion that changes in size, color, contour, surface, or configuration should be considered to be a melanoma. A full-thickness biopsy should be performed to establish the diagnosis and to enable microstaging (tumor thickness, level of invasion, ulceration, etc).

2. Measured tumor thickness is a more accurate and predictive factor than the level of invasion. Three categories are defined: *thin* (less than 0.76 mm); *intermediate thickness* (0.76 mm to 4 mm); and *thick* (greater than 4 mm).

3. Evaluation for metastases should consist of a history and physical examination, chest roentgenogram, and liver function tests. Additional confirmatory tests should be performed only when there are signs or symptoms suggestive of metastases. The most frequent sites of metastases are the regional lymph nodes, skin and subcutaneous tissues, lung, liver, brain, and bone.

4. The treatment for primary melanoma should consist of a surgical excision of the mole or biopsy site with a minimum margin of 2-cm of normal skin for thin melanomas and a minimum of 3-cm margins for intermediate and thick lesions where this is anatomically possible.

5. A regional lymphadenectomy is indicated for enlarged, firm nodes suspected of containing metastatic melanoma and in selected patients with normal-appearing nodes who have intermediate-thickness melanomas, especially those ranging from 1.5 mm to 4 mm.

6. In prognostic factors analysis of over 4,000 patients, tumor thickness, ulceration, gender, and site were the dominant predictive factors for patients with localized melanoma; the number of metastatic nodes and primary tumor ulceration were the most predictive for patients with regional node metastases; the number and site of metastases were the most predictive for distant disease.

7. In patients with distant metastases, surgical ex-

6. General guidelines for treatment sequences

Metastatic Site	1st Option	2nd Option	3rd Option
Skin, subcutaneous (trunk, head, neck)			
Isolated	Surgery	Radiation	Drugs
Multiple	Radiation	Drugs	Drugs
Skin, subcutaneous (extremity)			
Isolated	Surgery	Limb perfusion	Radiation/drugs
Multiple	Limb perfusion (± surgery)	Radiation	Drugs
Lung			
Isolated	Surgery	Drugs	Drugs
Multiple	Drugs	Drugs	Drugs
Liver	Drugs	Drugs	Drugs
Bone	Radiation (± surgery)	Drugs	Drugs
Brain			
Isolated	Surgery (± irradiation)	Radiation	—
Multiple	Radiation	Radiation	—
GI tract			
Isolated	Surgery	Drugs	Drugs
Multiple	Drugs	Drugs	Drugs

cision should be considered for isolated lesions that are surgically accessible, while radiation therapy (high-dose, low-fraction) is effective for skin and soft-tissue metastases, as well as for bone and brain disease. Results with chemotherapy and immunotherapy have been suboptimal.

REFERENCES

1. Balch CM, Soong SJ, Milton GW, et al: Changing trends in cutaneous melanoma over a quarter century in Alabama, USA, and New South Wales, Australia. Cancer 52(9):1748–1753, 1983.
2. Balch CM, Karakousis C, Mettlin C, et al: Management of cutaneous melanoma in the United States. Surg Gynecol Obstet 158(4):311–318, 1984.
3. Beral V, Evans S, Shaw H, et al: Cutaneous factors related to the risk of malignant melanoma. Br J Dermatol 109(2):165–172, 1983.
4. Clark WH Jr, Reimer RR, Greene M, et al: Origin of familial malignant melanomas from heritable melanocytic lesions. "The B-K mole syndrome." Arch Dermatol 114(5):732–738, 1978.
5. Milton GW, Balch CM, Shaw HM: Clinical characteristics, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 13–28.
6. Balch CM, Milton GW: Diagnosis of metastatic melanoma at distant sites, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 221–250.
7. Finck SJ, Giuliano AE, Morton DL: LDH and melanoma. Cancer 51(5):840–843, 1983.
8. Balch CM, Milton GW: Treatment for advanced metastatic melanoma, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 251–273.
9. Urist MM, Balch CM, Milton GW: Surgical management of the primary melanoma, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 71–90.
10. Urist MM, Balch CM, Soong SJ, et al: Head and neck melanoma in 534 clinical stage I patients. A prognostic factors analysis and results of surgical treatment. Ann Surg 200(6):769–775, 1984.
11. Urist MM, Balch CM, Soong SJ, et al: The influence of surgical margins and prognostic factors predicting the risk of local recurrence in 3,445 patients with primary cutaneous melanoma. Cancer 55(6):1398–1402, 1985.
12. Finck SJ, Giuliano AE, Mann BD, et al: Results of ilioinguinal dissection for stage II melanoma. Ann Surg 196(2):180–186, 1982.
13. Karakousis CP: Ilioinguinal lymph node dissection. Am J Surg 141(2):299–303, 1981.
14. Holmes EC, Moseley HS, Morton DL, et al: A rational approach to the surgical management of melanoma. Ann Surg 186(4):481–490, 1977.
15. Urist MM, Maddox WA, Kennedy JE, et al: Patient risk factors and surgical morbidity after regional lymphadenectomy in 204 melanoma patients. Cancer 51(11): 2152–2156, 1983.
16. Balch CM, Urist MM, Maddox WA, et al: Management of regional metastatic melanoma, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 93–130.
17. Balch CM, Cascinelli N, Milton GW, et al: Elective lymph node dissection: pros and cons, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 131–157.
18. Balch CM, Soong SJ, Murad TM, et al: A multifactorial analysis of melanoma. III. Prognostic factors in melanoma patients with lymph node metastases (stage II). Ann Surg 193(3):377–388, 1981.
19. Balch CM, Murad TM, Soong SJ, et al: Tumor thickness as a guide to surgical management of clinical stage I melanoma patients. Cancer 43(3):883–888, 1979.
20. Balch CM, Soong SJ, Milton GW, et al: A comparison of prognostic factors and surgical results in 1,786 patients with localized (stage I) melanoma treated in Alabama, USA, and New South Wales, Australia. Ann Surg 196(6):677–684, 1982.
21. Balch CM, Wilkerson JA, Murad TM, et al: The prognostic significance of ulceration of cutaneous melanoma. Cancer 45(12):3012–3017, 1980.
22. Logic JR, Balch CM: Defining lymphatic drainage patterns with cutaneous lymphoscintigraphy, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 159–170.
23. Reintgen DS, Cox EB, McCarty KS Jr, et al: Efficacy of elective lymph node dissection in patients with intermediate thickness primary melanoma. Ann Surg 198(3): 379–385, 1983.
24. Veronesi U, Adamus J, Bandiera DC, et al: Delayed regional lymph node dissection in stage I melanoma of the skin of the lower extremities. Cancer 49(11):2420–2430, 1982.
25. Sim FH, Taylor WF, Ivins JC, et al: A prospective randomized study of the efficacy of routine elective lymphadenectomy in management of malignant melanoma. Preliminary results. Cancer 41(3):948–956, 1978.
26. Krementz ET, Ryan RF, Carter RD, et al: Hyperthermic regional perfusion for melanoma of the limbs, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 171–195.
27. Balch CM, Hersey P: Current status of adjuvant therapy, in Balch CM, Milton GW (eds): Cutaneous Melanoma: Clinical Management and Treatment Results Worldwide. Philadelphia, J. B. Lippincott Co, 1985, pp 197–218.

To show you how many hypertensives stayed on INDERAL® LA (PROPRANOLOL HCl) after a major nationwide trial...

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL® LA stayed on INDERAL LA.[1*]

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.
A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were controlled merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985;145:1321-1323.

6412/187

Ayerst® AYERST LABORATORIES
New York, NY 10017

© 1986 Ayerst Laboratories

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Medical, psychological and social correlates of work disability among men with coronary artery disease. Mark A. Hlatky, MD; Thomas Haney, MSPH; John C. Barefoot, PhD, et al. Technical Publishing, *American Journal of Cardiology,* vol 58, 1986, pp 911–915.

This study identifies the medical, psychologic, and social factors that independently affect employment in patients with coronary artery disease (CAD). At coronary angiography, extensive clinical, psychological, and social profiles were collected on 814 men younger than 60 years with documented CAD. Clinical factors studied included measures of symptom severity, prior myocardial infarction, coronary anatomy, and left ventricular function. Psychosocial factors studied included the Minnesota Multiphasic Personality Inventory (MMPI), Zung Depression and Anxiety Scales, a type A structured interview, Jenkins Activity Survey, and measures of education and social support. Multiple logistic regression analyses were used to assess the relative strength of the relation between these different factors and the patients' employment status. Many single factors differed between the 204 men (25%) who were disabled and the 610 (75%) who were not. Disabled men were less educated but no different in age, marital status, or number of dependents. Disabled men had lower ejection fractions and higher indexes of angina, previous myocardial infarction, and coexisting vascular disease. Disabled men also were more depressed and anxious and had lower ego strength and higher hypochondriasis scores on the MMPI, but were no different in type A behavior. By multivariable analysis, the most significant ($p<0.01$) independent predictors of work disability were, in decreasing order of importance, low education level, history of myocardial infarction, high levels of depression, and high levels of hypochondriasis. It is concluded that psychological and social factors are strongly related to work status in patients with CAD, and may be more important than medical factors.

Obstetric malpractice litigation: the pathologist's view. Abraham Towbin, MD. The C.V. Mosby Company, *American Journal of Obstetrics & Gynecology,* vol 155, 1986, pp 927–935.

In obstetric malpractice litigation, there are two main bases of defense: the clinical basis and the pathogenesis basis. The malpractice suit in most cases involves an infant delivered at term that later develops cerebral palsy. Despite the fact that much information has been elucidated about the pathogenesis of cerebral palsy, the defense is often jeopardized by an inadequate presentation of relevant causal mechanisms, pathogenesis. Studies in recent years with correlated clinical and pathologic investigations have provided evidence that the occurrence of cerebral palsy is a time marker, reflecting cerebral damage incurred during the premature period, and does not result from the events of labor and delivery at term. There is broad need generally and in legal situations for clinicians and pathologists to become knowledgeable in comprehensively correlating obstetric factors with fetal-neonatal systemic pathologic conditions and with neuropathologic effects.

Diagnosis and treatment of small cell carcinoma of the larynx: a critical review. Alfio Ferlito, MD. Annals Publishing Company, *Annals of Otology, Rhinology, and Laryngology,* vol 95, 1986, pp 590–600.

Small cell carcinoma of the larynx is an uncommon neuroendocrine tumor with particular pathologic, therapeutic, and prognostic connotations. The first case of this lesion was observed in Canada in 1972. Fourteen cases of small cell carcinoma of the larynx were observed in the Ear, Nose, and Throat Department of Padua University in a series of 3,284 primary and secondary laryngeal and hypopharyngeal malignant neoplasms. This number constitutes the largest collection from a single institution in the literature and brings the total recorded cases to 66. The tumor is thought to arise from the argyrophilic Kulchitsky cells normally found in laryngeal mucosa. The diagnosis is based on the light microscopic appearance of the neoplasm and can be confirmed by electron microscopy. The differential diagnosis must be made from carcinoid, atypical carcinoid, small cell squamous carcinoma, small cell ductal carcinoma, lymphoma, mycosis fungoides, and metastatic lung small cell cancer. Systemic chemotherapy with radiation therapy is the accepted manner of treatment today. The survival of the patients treated with these modalities may be signficantly improved, and some patients may be cured.

Who has nightmares? The personality of the lifelong nightmare sufferer. Ernest Hartmann, MD; Diane Russ, MA; Molly Oldfield, MEd, et al. American Medical Association, *Archives of General Psychiatry,* vol 44, January 1987, pp 49–56.

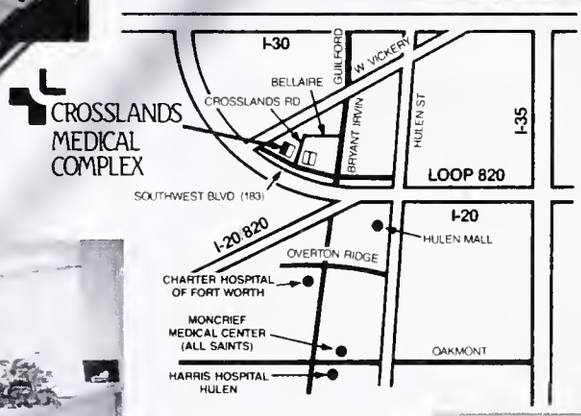
Twelve lifelong nightmare sufferers, 23 vivid dreamers who had no nightmares, and 12 persons who had neither nightmares nor vivid dreams were studied in a series of structured interviews, psychological tests, and other tests. The group with nightmares had significantly higher scores on the "psychotic" side of the Minnesota Multiphasic Personality Inventory profile than the other two groups, scored higher on a "boundary deficit" score of the Rorschach test, and had more first- and second-degree relatives with nightmares, psychological problems, and psychiatric hospitalization. There were no significant differences between the groups with vivid and nonvivid dreams. On interview, the frequent nightmare sufferers were a group of sensitive, open persons who had features of the "schizophrenic spectrum disorders," but who also had artistic and creative tendencies and interests, in contrast to the other groups. These results confirm and extend our previous findings in a group of 38 frequent nightmare sufferers.

B.Y.O.S.*

CHECK YOUR PERSONNEL WORRIES AND BUSINESS FRUSTRATIONS AT THE DOOR.

This is your invitation to explore a breakthrough officing concept for physicians. Far the physician just beginning practice ar far the established physician with many autside demands — large haspital practices, practices in multiple lacatians, family ar ather business interests — the administrative and business tasks af a privately awned ar leased affice are cumbersame and time-cansuming.

A prafessianal management graup has taken the respansibility af fully furnishing, equipping and staffing Crosslands Medical Camplex. Each physician is charged an haurly rate for use af the facility based an a re-served time schedule. He enjays a private suite and exam raams and shares the lab, X-ray, nursing and clerical staff with ather physicians.



✳ Bring your own stethascape, but that's all you'll need when afficing at Crosslands Medical Camplex. It's *practice made perfect.*

Write ar call far free brachure with camplete details.

6420 Southwest Blvd.
Suite 200
Fort Worth, Texas 76109
817/763-0303

CROSSLANDS MEDICAL COMPLEX

practice made perfect

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Please indicate six key words for indexing.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within four months of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

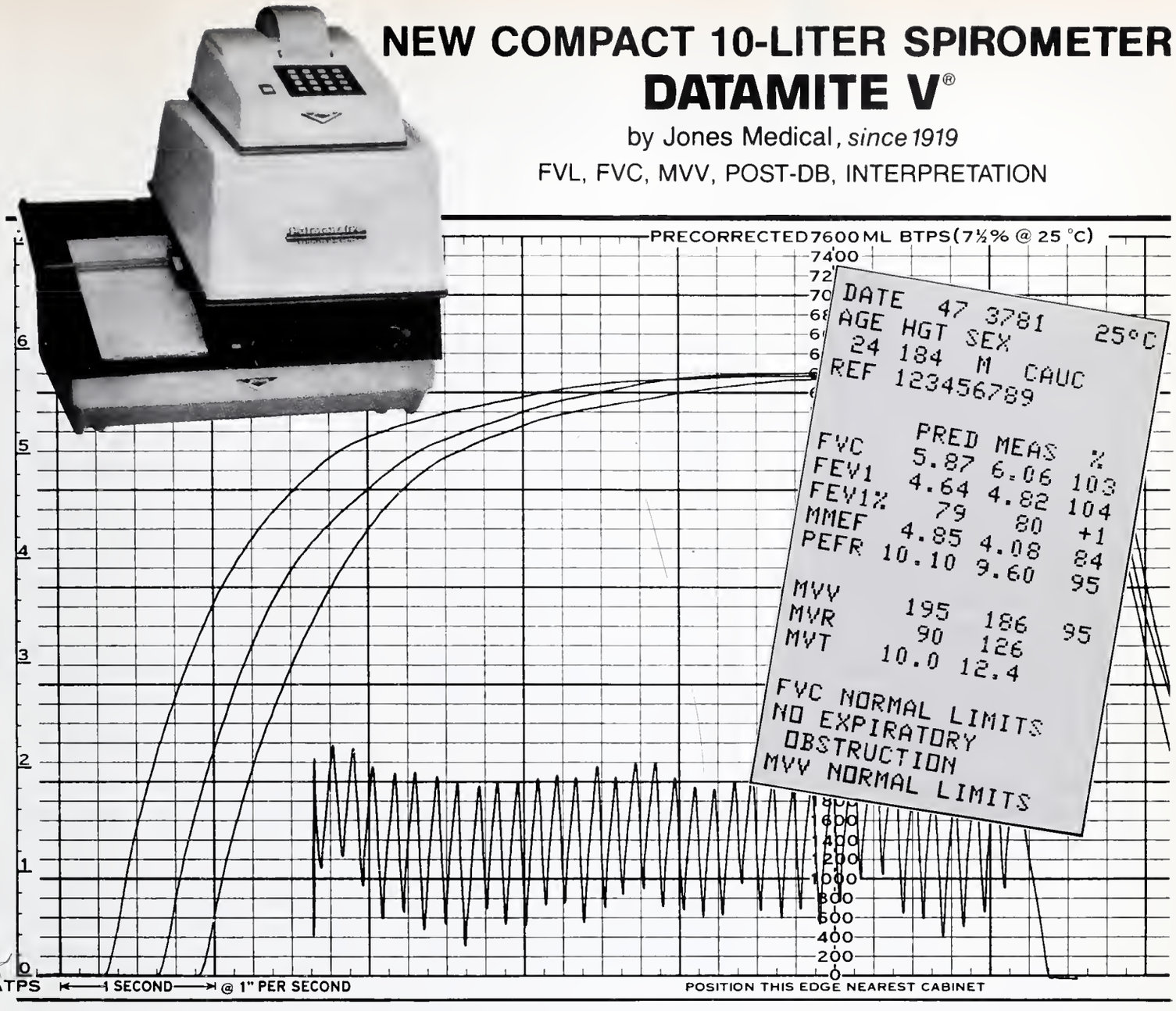
Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

NEW COMPACT 10-LITER SPIROMETER

DATAMITE V®

by Jones Medical, *since 1919*

FVL, FVC, MVV, POST-DB, INTERPRETATION



IN LESS THAN FIVE MINUTES YOU HAVE A COMPLETE, LEGALLY ACCEPTABLE, GRAPHIC AND COMPUTERIZED RECORD

- Easy pour-in, pour-out sterilization
- Volume displacement accuracy
- 5-year bellows warranty
- Easily portable
- Meets ATS, ACCP, NIOSH requirements

FOR OFFICE

- Best test documentation
- Selectable interpretation predicters & parameters
- 35 patient memory option

FOR INDUSTRY

- 200 patient built-in memory option
- OSHA acceptability prompts
- Automatic calibration feature

ONLY **$3,995** LEASE/PURCHASE TERMS AVAILABLE AS LOW AS **$110** PER MO.

FREE DEMONSTRATION IN YOUR OFFICE

Conveniently and immediately available to you from

METRO
654-4700

IN FORT WORTH
CALL 817/877-4600

Western Medical Corp.

IN HOUSTON,
CALL 713/370-3859

OR CALL TOLL FREE
1/800/323-7336

TMA membership
A valuable asset

The Texas Medical Association was born Jan 17, 1853, when 35 physicians met in Austin for the purpose of "promoting the advancement and improvement, as well as elevating the standard of our profession within this State." In the 134 years since its founding, the association's activities have expanded to include seven missions: (1) represent the medical profession and the public it serves, (2) develop membership, (3) provide scientific information, (4) provide socioeconomic information, (5) maintain medical education standards and assess the need for health professionals, (6) maintain standards of conduct and performance, and (7) maintain sound management and secure the future of TMA.

This article examines how the association accomplishes these missions and how the missions contribute to the value of membership in the Texas Medical Association.

Represent the medical profession and the public it serves

TMA's legislative and legal activities are primary manifestations of the mission to represent the medical profession and the public. Under the guidance of the Council on Legislation, the association's Division of Public Affairs is monitoring and participating in the activities of the 70th Texas Legislature. Chairman William G. Gamel, MD, Austin, notes that the council "works long and hard at getting medicine's input into health laws at the state and national levels." The primary focus of the association's legislative efforts this session is tort reform. The near-universal liability problems that businesses, major industries, professionals, local governments, and school districts are experiencing has fostered a once-in-a-decade opportunity to clarify and reform all the statutes that have to do with damage recovery in Texas' civil justice system. In this arena, TMA supports reforms to tort law, judicial elections, insurance regulation, and professional discipline, which according to Dr Gamel, affords an opportunity "to tighten up the practice of medicine and keep it a proud profession that does a good job."

During the current legislative session, the public affairs staff also is working with issues related to allied health/licensed providers, sunsetted health agencies, public health, maternal and child health, medical education, socioeconomics and reimbursement issues, drugs/alcohol, and mental health.

The Council on Socioeconomics observes government health programs. Vice Chairman Grover L. Bynum, Jr, MD, Austin, reports, "We interface with Medicare and Medicaid, as well as rural health, insurance, and health planning. It's a bag of worms. We monitor changes in legislation as they relate to government health programs and physician reimbursement." Based on their knowledge of these areas, the council recommends appropriate responses for the association.

Related to the association's legislative activities is the Texas Medical Political Action Committee, which offers political education and candidate support. During 1986, contributions to TEXPAC exceeded $600,000.

The association's legal staff also represents the profession and the public by representing the association at meetings, preparing briefs and testimony, reviewing rules promulgated by government agencies, speaking before county societies and medical groups, publishing articles in *Texas Medicine*, and responding to requests from doctors for legal information on a host of subjects.

Develop membership

The association's membership has reached more than 26,000 through member recruitment activities that showcase TMA's attractive member services. These services include programs offering Gold MasterCard, VISA-MasterCard, collection services, magazine subscription, medical market analysis, travel, and a physicians placement service. TMA's insurance program is considered the association's most valuable member service, with approximately 23,000 insureds enrolled in the program and an annual premium income of approximately $40 million.

Provide scientific, socioeconomic information

Among TMA's vehicles for providing scientific information are *Texas Medicine*, the Memorial Library, the annual session and other continuing medical education courses, and a public information program.

Each dues-paying member of the association receives a subscription to TMA's award-winning journal *Texas Medicine*. Each month the journal publishes scientific articles that have been reviewed by a panel of experts. Other journal departments feature information on association activities, public health, socioeconomics, and medicine and the law. It also includes listings of continuing medical education courses and meetings.

Also providing information is the TMA Memorial Library, with more than 60,000 books and bound journals and a vast collection of motion pictures, audiocassettes, videocassettes, and slide presentations. The library subscribes to 1,045 medical and health-related journals, and offers its patrons an automated interlibrary loan service and a computerized bibliography search system.

The association's single largest continuing medical education meeting is its annual session, which is the largest state medical society meeting in the country. This May, the Houston meeting will feature 500 speakers and program participants, 200 technical and scientific exhibits, 24 scientific section programs, 10 special symposia, and 29 medical specialty societies and related medical groups. Many of the programs qualify for credit under category 1 of the Physician's Recognition Award of the American Medical Association.

In addition to the annual session, the association sponsors a number of practice management workshops throughout the state each year, as well as CME courses in conjunction with the fall and winter conferences in Austin.

The association provides scientific and other information to the public through its HealthWise series of brochures, news releases to newspapers and company magazines, and its speakers bureau. The association also provides public information through radio "Health Tips" (in English and Spanish) and public service announcements for radio and television use.

Through its News Hotline, the association updates members daily on the status of medically related legislation. Call 1-800-252-7003; in Austin, 479-7894.

Maintain medical education standards, assess the need for health professionals

Through the Council on Medical Education, TMA monitors trends in the state's medical schools and graduate medical education programs. The annual physician manpower study provides comprehensive data on the supply and distribution of physicians in Texas.

In the area of CME, the association conducts an accreditation program that helps provide physicians of the state with greater opportunities for high quality continuing medical education. Accreditation activities of TMA date back to 1974 when the Committee on Continuing Education first considered development of a pilot study to implement a program in the state. The committee began developing guidelines and procedures the following year to initiate a pilot study. It identified institutions and organizations interested in receiving accreditation of their continuing education activities. In 1976, the AMA accredited TMA to serve as the intrastate accreditor. The committee accredited the first two institutions in 1977.

Maintain standards of conduct and performance

Matters regarding standards of conduct and performance, or ethics, come under the purview of TMA's Board of Councilors. Chairman James C. Mann, MD, Beaumont, notes, "The board's most important function is that—as our name states—we are councilors. We are men who have been in organized medicine long enough to have experience, and we counsel with the other boards and committees, and mostly, we serve the component county societies."

In carrying out its duties, the board handles and refers complaints and distributes the TMA Disciplinary Procedures Manual and study material on medical jurisprudence.

In a related service, TMA's Committee on Physician Health and Rehabilitation sponsors a telephone hotline for physician health and rehabilitation. Anyone, including the impaired physician, may call to report a need for help and intervention for a physician whose health or habits impair his or her ability to practice medicine safely. Rehabilitation has brought many back into practice. A recent report to the association's House of Delegates observed, "The hotline is an integral form of assistance. The annual cost is $420. The incalculable return of the association's dollars in terms of the lives and health of both physicians and patients would seem to justify the expense of the hotline many times over."

Maintain sound management and secure the future of TMA

The Texas Medical Association has an operating income in excess of $7 million. In order to assure a stable base for continued association activities, TMA continually works to increase membership and strengthen relationships within the medical community. In addition to increasing membership income, TMA's Board of Trustees is developing nondues sources of income and moderating expense growth. One of the historical strengths of the Texas Medical Association has been its ability to represent physicians, meet other member needs, and maintain its financial integrity.

The bottom line

Adding up the many services that the association provides its members, the profession, and the public, TMA membership amounts to a bargain. As the deadline for membership renewal approaches, consider the benefits it offers.

AIM HIGH

A SPECIAL PRACTICE FOR SPECIALISTS.

If you're a **Surgeon or OB/GYN or Other Medical Specialist**, the Air Force may have a special practice for you. What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special! Find out just how special your practice can be. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 784-3132 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE

Dx: recurrent herpes labialis

"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms . . .** blisters **never formed . . .** remarkable." DH, MA

"(In clinical trials) **. . . response** was **dramatic. HERPECIN-L . .** proven **far superior.**" DDS, PA

"All patients claimed **shorter duration . . .** at **prodromal symptoms . . .** HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: **CAMPBELL LABORATORIES, INC.**, P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

Feature

Peer review in Texas
A survey of medical staffs

As both a direct and indirect consequence of the growing debate concerning Texas' liability crisis, medical peer review, as well as the regulatory conduct of the Texas State Board of Medical Examiners, has come under close legislative and public scrutiny. Formal legislative inquiries last summer uncovered an abysmal lack of understanding of the purpose and functions of medical peer review and a lack of confidence in its efficacy among legislators. The Texas Medical Association, as part of an aggressive effort to respond to these concerns, surveyed the medical staff section of TMA, chiefs of hospital medical staffs, chairmen of county medical society grievance committees, and county medical society boards of censors to measure the quantity and quality of peer review, and physician attitudes. Given the relatively small universe sampled, the response rate to the survey was not sufficient to apply the usual standards of survey accuracy. However, responses represented a substantial portion of the sampled universe of those involved in peer review in Texas, and should be regarded as significant in that sense. More importantly, a larger, statistically valid study of all primary care physicians resulted in virtually identical responses on key test questions, indicating a close correlation between this sampling of medical staff participants and the practicing physician population. This article reviews the results of those studies and their public policy implications in the current session of the Texas Legislature and establishes an empirical basis for legislative discussion of medical peer review.

Principles of peer review legislation

HB 283 by Rep Mike McKinney, MD (D-Centerville), and SB 171 by Sen Chet Brooks (D-Pasadena) have been filed at the request of the Texas Medical Association with the objectives of strengthening the peer review process and requiring that final and substantial adverse disciplinary actions by a peer review committee be reported to the State Board of Medical Examiners for possible disciplinary action. Although the specific bill language may vary somewhat as it undergoes legislative review and debate, there are certain overriding principles that must remain intact in order to sustain this delicate yet effectual process. For the purpose of this article, peer review is broadly defined as the physician evaluation of medical and health care services, including the evaluation of the qualifications of physicians and of the quality of patient care rendered by those physicians.

Peer review encompasses these elements:

1. *Confidentiality*: It is absolutely essential to the process that all proceedings of a medical peer review committee remain confidential, and that information is not breachable through a subpoena or court order, except by a defendant physician in preparation of his or her defense.

2. *Civil immunity*: All 50 states provide some measure of immunity for "good faith" peer review activities, although this does not prevent a retaliatory or intimidation suit being filed against medical staffs and hospitals.

3. *Bad faith counterclaims*: Given the likelihood that a physician sanctioned by a committee of his peers will file an intimidation or retaliatory suit, it is essential that the peer review body be able to recover its costs attributable to such a suit, including reasonable attorneys' fees, if the peer review committee's efforts are found to have been conducted in good faith and without malice.

4. *Due process*: It is equally important that a physician facing sanctions from a peer review committee be accorded due process, including proper notice, reasons for the action, right to a hearing, reasonable time limits within which to request a hearing, and the ability to review the basis for the proposed sanctions.

5. *Reporting final actions*: Any final, substantive, and adverse disciplinary actions that the peer review committee takes against a physician, as well as any voluntary/involuntary resignations or terminations, should be reported to the State Board of Medical Examiners. This closes a gap in the medical disciplinary process that periodically has allowed physicians removed from medical staffs to "jurisdiction hop" to other counties and other hospitals undetected by the state board.

Caveat: It should be considered axiomatic that peer review should be conducted in good faith and without malice, with the expressed purpose of identifying technical deficiencies among physicians and correcting them, or removing from practice physicians not competent to practice; equally important, the protections that are forwarded under this proposed peer review legislation should be applied solely to quality assurance and competency considerations, and not economic, utilization-based review.

1. Likely effectiveness of quality assurance mechanisms.

	Very Effective (%)	Somewhat Effective (%)	Not Very Effective (%)
Existing mechanisms:			
Hospital staff review	33	49	13
The Texas State Board of Medical Examiners	23	44	28
Board certification/recertification	22	46	28
Continuing medical education	21	46	29
Medicare/PRO	9	43	43
County medical society review	6	36	53
Additional mechanisms:			
Mandatory continuing medical education as a condition of relicensure	20	42	33
Recertification by specialty boards	18	41	36
Periodic testing for drug or alcohol abuse	13	34	48
Periodic relicensure examination	12	36	47

2. Incidence of peer review by category.

	Utilization	Credentialing	Quality Assessment
All respondents	222.6	83.2	235.3
Hospital level I	460.7	216.8	484.2
Hospital level II	245.7	59.0	287.2
Hospital level III	154.7	58.7	129.6
Urban areas	333.5	130.7	354.5
Rural areas	173.4	44.6	165.3

3. Positions on reporting to Board of Medical Examiners.

Activity	First Occurrence Should Be Reported (%)	Recurring Problem Should be Reported (%)
Criminal conduct	89	3
Substance abuse	57	36
Nonscientific practice	32	60
Nontherapeutic prescribing	32	57
Involuntary restrictions on staff privileges	32	54
Involuntary removal of all staff privileges	67	24
Voluntary resignation as a result of medical staff inquiry	46	38
Failure to diagnose	3	82
Failure to operate	4	81
Failure to treat	4	81
Unnecessary surgery/treatment	15	75
Negligent surgery	32	58
Negligent diagnosis	20	69
Negligent treatment	22	66
Breach of confidentiality	18	67
Other	2	2

What works, and what doesn't

Self rating—good to excellent: Medical staff respondents were asked how they rate the job that physicians in their area are doing with regard to peer review and discipline. Twenty-one percent of all respondents gave themselves an excellent job rating in peer review, and 51% think they are doing a good job, a cumulative 72% positive rating. Seventeen percent feel their efforts are only fair, and 7%, poor.

These ratings track closely with a separate study of all primary care physicians conducted by TMA last summer. In that survey, 50% of those who were involved in peer review rated their efforts "good," and 23%, "excellent." These job ratings were similiar among every category of respondents, at all levels of hospitals, and with no significant difference in these perceptions in either urban or rural areas.

The respondents also were asked to rate several mechanisms that are used for quality assurance. The effectiveness ratings are listed in Fig 1.

The biggest chill—intimidation suits: Physicians on a medical staff easily identified what doesn't work in peer review: 16% of the responding physicians said that the threat of a lawsuit makes them very reluctant to participate in peer review, and 51%, somewhat reluctant—cumulatively more than two thirds of all physicians involved in peer review who were surveyed. Equally instructive, 57% of the physicians surveyed said that they would be more likely to participate if they had an additional agreement of legal immunity, such as recovering court costs and attorney fees incurred in defending good faith actions; 51% would be more likely to report a physician to the State Board of Medical Examiners under those conditions.

These responses, and comparable responses in a separate primary care study (see February 1987 *Texas Medicine*), support the compelling argument that fear of retaliatory and intimidation suits has a chilling effect on the vigorous pursuit of peer review and discipline among Texas physicians.

Quality and quantity measurements: The survey asked how many cases were reviewed by staff peer review committees at their respective hospitals during the most recent 12-month period for

which they had data. We asked that the information be broken down by cases reviewed that (1) resulted in disciplinary or other corrective action, and (2) involved a disciplinary corrective action. The survey showed what proportion were reviewed for either practice problems (competency, technical skills), substance problems (drugs or alcohol abuse), ethical problems, or other problems.

Fig 2 shows statistical means (averages) based on category median values, and should be considered a reasonably accurate and reliable guide to the relative numbers in each case category. The proportions also are means, but because they are based on only those responding, and because that number is a relatively small percentage of the overall sample, they are less reliable figures. Nonetheless, they indicate some discernible trends in both the quality and quantity of peer review.

The only notable difference between urban and rural areas is the rural reliance on corrective rather than disciplinary measures, probably a result of the fact that there are a limited number of physicians available to practice in a rural setting, and it is therefore better to train and rehabilitate a peer than to formally sanction him or her.

What should be reported? In drafting a statute that mandates the reporting of final and substantive discplinary actions, it is important to understand what activities the reviewing physicians think are important. The survey asked respondents to select which activities of practicing physicians they believe should be reported to the state board on either the first occurence or only if it is a recurring problem. Fig 3 lists the Board of Medical Examiners' categories of malpractice activities for which they keep statistics. In reading the table, it is important to remember that the respondent shows only one of the responses, so the total who feel that a given activity ought to be reported is a sum of the two columns. For virtually every activity listed, that sum is in the range of 85% to 90%, indicating a strong desire to report these kinds of activities to the board eventually, once the peer review mechanism has had an opportunity to work.

These medical staff opinions clearly reflect the important role of quality assurance and technical skill improvement accomplished by systematic peer review. The respondents indicate that most other kinds of technical or ethical failures on the part of physicians should be reported if they recur, but not necessarily on the first occurrence. They want an opportunity to correct these problems and improve the quality of the care delivered by the physician, rather than to remove him from practice. In comparing these reports by urban versus rural physicians, we found virtually no difference, although rural areas were found to be slightly more tolerant.

Summary and conclusions

TMA's peer review survey, the first of its kind in Texas, reaffirms most of the common medical perceptions regarding the efficacy of peer review. It tends to work well, but clearly could work better if physicians had better protections from the chilling effect of retaliatory and intimidation suits when they sanction their peers.

Not surprisingly, there is strong medical consensus regarding the kinds of physician conduct that should be sanctioned and reported immediately to the Board of Medical Examiners. Both the quality and quantity of peer review actions were consistent with the size of the hospitals, regardless of whether it was a rural or urban setting.

In writing legislation that tinkers with Texas' peer review process, lawmakers should keep in mind the above stated principles and the normative views of physicians who are involved daily in the review and sanctioning of their peers.

KIM ROSS
TMA Division of Public Affairs

© The Advertising Council, 1985

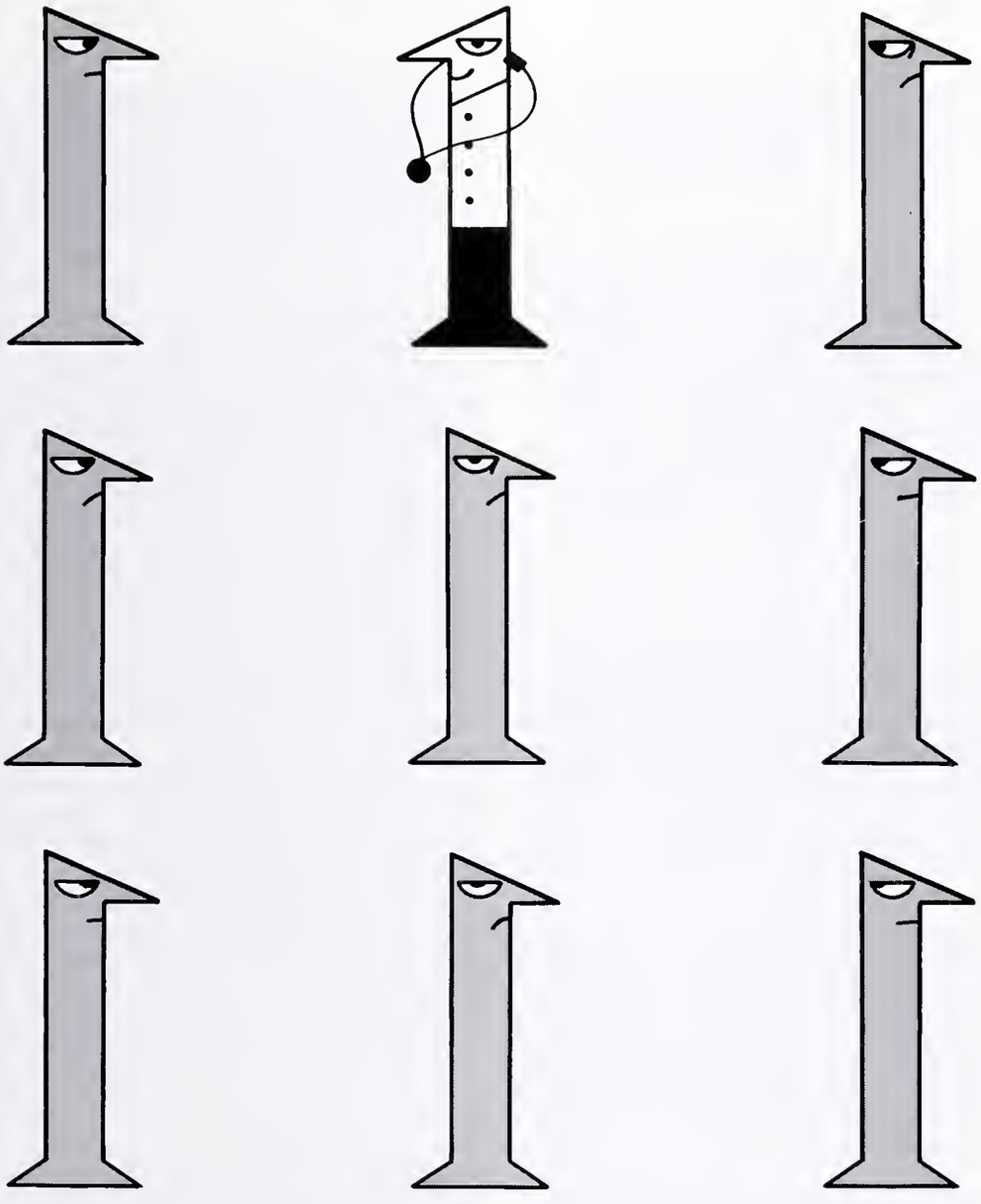
"THANKS TO YOU, MY LIFE'S A WRECK."

"And it's all because you don't take a couple of seconds to buckle your safety belt. Listen, it doesn't take a genius to figure out that safety belts save lives. So stop destroying my life. Buckle up. Please."

YOU COULD LEARN A LOT FROM A DUMMY. BUCKLE YOUR SAFETY BELT.

A Public Service Message Ad Council U.S. Department of Transportation

WE'RE THE ONE



AND ONLY auto leasing company endorsed by both the Texas Medical Association and the Tarrant County Medical Society, with good reason. Call our toll-free number for more information.

1-800-442-6158

TRANS-TEXAS LEASING
9330 LBJ Frwy, Suite 635
Dallas, TX 75243
1-214-699-9494

Anatomy of a Medicare lawsuit

The following article describes the extensive efforts of the American Medical Association, Texas Medical Association, and the Lubbock–Crosby–Garza and Dallas county medical societies to restrain the implementation of the new Medicare fee control provisions. At the time of this writing, Judge Barefoot Sanders of the US District Court for the Northern District of Texas, after extending the temporary restraining order issued by US District Judge Halbert O. Woodward in Lubbock, denied the plaintiffs' motion for a preliminary injunction. The underlying issues in the challenge to the constitutionality of the fee control provisions remain to be addressed in a subsequent hearing.

On Dec 30, 1986, the AMA, TMA, Lubbock-Crosby-Garza County Medical Society, seven physicians, and three patients appeared before Federal Judge Halbert O. Woodward in Lubbock, Tex, seeking emergency relief for all patients and physicians in the United States from certain new Medicare provisions in Section 9331 of the Omnibus Budget Reconciliation Act of 1986 (OBRA) (1).

Attorney Jack Bierig, JD, of Sidley and Austin, Chicago, began for the plaintiffs, stating:

> " . . . Section 9331 is really a most remarkable law. It tells Medicare patients that they can purchase only those medical services which are available at or below the price limits decreed by the federal government. It does not simply determine what the Medicare program will pay. Rather—this is very important—it says that Medicare patients may not use their own private funds to pay the same amount for medical services as is paid by other patients . . . ."

Mr Bierig described other aspects of the law. He explained that if a Medicare patient continued to be seen by his doctor, and that doctor was a "nonparticipating physician," the patient would receive less reimbursement from the government than if he were treated by a participating physician. The government penalizes the patient for his choice.

This law, the plaintiffs argued, creates a "two-tiered system of medical care in which Medicare patients are second-class citizens. We believe that this law and the two-tiered system it establishes are repugnant to the Constitution of the United States."

On Dec 10, 1986, the AMA House of Delegates adopted a resolution directing the association to file a lawsuit challenging OBRA. Immediately, AMA attorneys began making the extensive preparations necessary to file such a suit. The Texas delegation had expressed particular interest in the challenge, and Texas forums for the challenge were evaluated. Lubbock, Tex, was selected.

The matter before the court on Dec 30, Judge Woodward announced, was to decide whether a temporary restraining order should be granted. The plaintiffs argued that the law was being administered in an arbitrary manner, contrary to the fundamental notions of fairness. Specifically, the act required each physician to decide before Jan 1, 1987, whether to be a "participating physician" (who accepts assignment 100% of the time) or a "nonparticipating physician" (who accepts assignment less than 100% of the time). OBRA provides physicians certain incentives to participate, including (1) freedom from concerns about violating their maximum allowable actual charge (MAAC) limits and (2) reimbursement to patients at 100% of the prevailing charge. The emergency relief was requested because physicians needed specific profile information in order to assess the economic consequences to themselves and their patients before deciding whether to participate. This information was not available to most physicians by the Dec 31 deadline. In fact, government and Medicare carrier documents indicated that the MAACs would not be available until about March 1. Thus, this lack of information created uncertainty that unconstitutionally forced physicians to participate just to avoid the risk of sanctions.

Even the information upon which to figure a physician's MAACs was unavailable to most physicians. The needed information included the physician's customary charges, the prevailing charges if the physician does not participate, the prevailing charges if he does participate, and the 50th percentile for 1985–1986 charges for nonparticipating physicians for those procedures on which the physician did not have April-June 1984 customary charges.

In a meeting quickly arranged by the Lubbock-Crosby-Garza County Medical Society just prior to Christmas, many physicians advised that although they had requested the essential profile information, it had not been received. Those who had received information said that it appeared to be incomplete or inaccurate. As a result of the MAACs and the sanctions threatened, some physicians filed affidavits with the pleadings on Dec 24, saying that they no longer could risk treating patients covered by Medicare. Several physicians with particularly convincing testimony were available to testify at the hearing.

Electing not to receive live testimony on Dec 30, the judge granted a temporary restraining order. He concluded that it was "fundamentally unfair" for the government to require physicians to make a "blind decision" on whether to participate. He called the nonparticipatory status "a blacklist" of physicians treating Medicare patients.

Due to a crowded criminal docket, the judge then transferred the case to Judge Barefoot Sanders' Court in Dallas. A few days later, Judge Sanders extended the temporary restraining order (TRO) to noon, Jan 20, and set a hearing on the preliminary injunction for Jan 13–14, 1987.

The extended TRO delayed enforcement of Section 9331 of the act, requiring physicians to decide prior to Jan 1, 1987, whether to sign a participation agreement. It also delayed enforcement of any deadlines or other matters with respect to the decision whether to participate, until the court could conduct a hearing on the preliminary injunction.

In addition, the court restrained the government from sanctioning a physician for actual charges made from Jan 1 to noon Jan 20 in excess of the maximum allowable actual charge or "otherwise taking actual charges made during this period into

consideration in initiating or applying sanctions."

Finally, the order required that all payments for Medicare-covered services be made at 100% of the prevailing charge levels. No reduction to the 96th percentile was permitted when patients saw a nonparticipating physician during the restraining order period.

Dallas

The Dallas County Medical Society met Jan 7 to help prepare for the hearing Jan 13 in Dallas. An informal survey showed that about one half of the members in attendance who had requested their MAACs had not received them. Of those who had received them, many found inaccuracies and incomplete information. No physicians in the group of 115 indicated that they could figure out what their MAACs were. Physicians at the Dallas meeting, as they had in Lubbock, willingly came forward to provide additional information to permit follow-up on specific fact situations that would illustrate, in a dramatic way, the unfairness of the law as it was being implemented. AMA and TMA attorneys screened fact situations, and affidavits of the best cases were prepared for signature. As in Lubbock, the Dallas County Medical Society and Dallas physicians fully assisted in the effort.

On Monday, Jan 12, the team of lawyers prepared those physicians and other witnesses from around the country who were selected to testify on Tuesday and Wednesday. The additional briefs, lists of witnesses, and responsive pleadings were filed. The government was seeking to limit the restraining order to Texas only and was seeking a $1.5 million per day bond from the plaintiffs. The government argued that this was the amount the program was losing as a result of the temporary restraining order. (The judge denied both of these motions.) Physicians adjusted their schedules to meet the needs of the court. The plaintiffs were ready.

Hearing begins

Attorney Jack Bierig, JD, opened for the plaintiffs. Judge Sanders interrupted him many times. Does the statute require the distribution of the profile information? Does the Constitution require such a distribution? The plaintiffs responded. Congress provided a choice, to participate or not participate. In order to make an informed choice, certain profile information is needed. This information is in the hands of the government. The government has not provided it, as requested. Hence, no informed choice can be made, and due process (fairness) is violated.

The government lawyers responded: A multitude of factors go into the decision of whether to participate. The profile information is only one small part. Physicians do not need perfect profile information to make their decision. They can make reasonable estimates on their own. The statute does not require the government to provide MAACs or any other information. The Constitution certainly does not, and besides, the AMA already tried to litigate the question of capping Medicare fees when it unsuccessfully challenged the fee freeze passed in 1984 in a federal court in Indiana. The urgency of the emergency relief sought here is of the AMA's own making, the government said. The AMA arranged the flood of requests that came in in mid- and late-December for the purposes of this lawsuit, the government argued. And, because there was no likelihood of success on the merits of the constitutional challenge, the court should not issue a preliminary injunction.

Witnesses called

Ten witnesses were called to the stand by the plaintiffs and cross examined by the defendant's lawyers. Bob Heath, executive officer for the Dallas County Medical Society, testified on the results of the informal survey of the society membership at its Jan 7 meeting. Of 71 physicians who requested profile information, only 31 received it. Of the 31 who received it, 21 found the information to be inaccurate or incomplete. None of the 115 physicians present at the meeting could figure out their MAACs!

Myron R. Zisman, MD, testified to his fear of violating the MAACs. During the 1984–1986 fee freeze, Medicare authorities incorrectly had charged him and one of his partners with violating the freeze. After months of record-checking and correspondence between Dr Zisman and Medicare, the carrier finally concluded that he was clean. Yet, the information on which to figure the MAACs was not yet available. He could only anticipate further assertions of violations.

Virginia Kennedy, JD, Dircetor of Public Health at the Medical Society in the District of Columbia, supplied the results of a survey of physicians in the DC area. The results were similar to those of Mr Heath's survey. Bradford Bek, an attorney and expert consultant from Pennsylvania, described a similar experience in the states where he performs consulting work. The information needed to calculate the MAAC for each procedure for each of his physician clients was either unavailable or incomplete and inaccurate. Earlier profile information that his physician clients had requested and received could not be used to accurately calculate the profiles and MAACs needed for the physician to make an informed participating/nonparticipating decision, much less to assure that the MAACs were not violated.

Albert F. Hendler, MD, Dallas, then testified that his Dec 12 request for profile information still had not been answered. He was concerned about the effect the MAACs would have on his ability to continue to provide the same level of service, to freely answer patients' phone requests, call in their prescriptions, help them prepare their insurance forms, and to replace and maintain needed equipment, and retain high-quality office employees. He was concerned that his patients would be "punished" if he decided not to participate. Those with long-term illnesses would, in a sense, be "trapped" into the lower reimbursement because most would not want to leave for another physician.

R. H. Mathews, MD, had a similar concern. As a surgeon, only about 20% of the 250–300 operative procedures he performed at a referral center were performed during the April-June 1984 base period. Thus, he needed the 50% of customary charges from the carrier in order to compute his MAACs. He was anticipating a required rollback on his charges because of this lack of base period charges for most of the procedures he performs. Since he had no information with respect to his MAACs, he had no way to determine whether he was violating

the MAACs for his services.

Jerry Buckingham, a Mississippi-Tennessee consultant, described similar difficulties his clients were having in getting the information needed to compute their MAACs and in getting complete information.

Bruce Blehart, JD, AMA legislative attorney, also testified. In response to AMA General Counsel Kirk Johnson's examination, Mr Blehart described the extreme efforts the AMA took to influence the Department of Health and Human Services in implementing the new fee controls under OBRA. He pointed out the "Dear Doctor" letter, which HHS drafted and carriers sent to all physicians, did not advise physicians that they needed underlying information to figure their MAACs and to determine what they would receive if they participated and what their patients would receive if they did not participate. In fact, the letter advised physicians that their MAACs would not be available until March.

On the other hand, the letter from HHS to the carriers clearly stated the need to have profile information available on request due to the importance of this information in the decision-making process for physicians. Mr Blehart also testified that AMA survey information obtained from phone calls to 750 physicians also illustrated the problems in obtaining accurate data nationwide.

David Ledner, MD, Dallas, testified that he had no base period data and, therefore, had to obtain profile information from the carrier in order to determine his MAACs. He anticipated required rollbacks on his fees and was fearful that his Medicare patient load would have to be reduced.

The last plaintiffs' witness was Marvin J. Noble, MD, a Dallas anesthesiologist. He had received his profile information. The incompleteness of the printouts was described. Many of his MAACs were not calculable. He was fearful that the allowable MAAC charges would not cover his overhead costs and he would have no choice but to reduce his Medicare patient load. Even his well-to-do Medicare patients would be denied the right to his services, he said.

The government's witnesses

The government called three witnesses. Jean Harris, special assistant to the administrator of HHS Health Care Financing Administration, stated that as of Jan 12, all Medicare carriers had responded to requests for information received on or before Dec 31. However, since then, the many requests generated by the AMA, TMA, and other state medical societies had created a backlog. Ms Harris testified that these requests were unnecessary, as physicians could calculate their own MAACs and profiles. The 60,600 requests generated as of Dec 19 were totally unnecessary. On cross examination by attorney David Graham, JD, Chicago, she assured the court that sanctions would not be initiated until a pattern of a year's charges were compiled. Physicians had plenty of time to adjust their charges after they receive their MAACs on or about March 1. HHS will warn physicians in advance if they may have a MAAC problem, Ms Harris stated. Precise MAAC information prior to March 1 is not necessary.

Ms Barbara Harvey, director of staff services, Blue Cross-Blue Shield of Texas, the Texas Medicare carrier, also testified. She noted that as of Jan 12 (the day before the hearing), BC–BS had responded to all requests received by Dec 31. Additionally, she advised that the Medicare carriers had just received instructions from HHS to send out the MAACs to nonparticipating physicians by Jan 31 and that BC–BS had every intention to comply.

On cross examination by attorney Jim Dechene, PhD, JD, Chicago, she was asked several questions about a Lubbock physician's fee profile printouts that the carrier sent. Many omissions in the different computer runs for customary as compared to the prevailing fees for each procedure were noted. No way to compute the MAACs for these procedures was suggested.

Finally, Mr Charles Booth, director, Office of Reimbursement Policy, HHS Health Care Financing Administration, testified. He announced that on Tuesday, Jan 13 (the first day of the hearing) the government had published in the *Federal Register* that it would not sanction a physician unless the physician had a pattern of charges that violated both the median and the weighted average of April-June 1984 base period charges. With this announcement, the government relinquished its earlier decision (challenged by the plaintiffs) to hold nonparticipating physicians to the median of their base period charges for sanction purposes.

Closing arguments

Both sides and one attorney representing three parties who were seeking to intervene made closing arguments. Judge Sanders handed down his decision on Jan 20, 1987, denying the plaintiffs' motion for a preliminary injunction and dissolving the temporary restraining order. The plaintiffs are appealing this decision. The underlying issues challenging the constitutionality of the fee control provisions of OBRA remain to be addressed in a subsequent hearing in order to present any reduction in access to quality medical care by medicare beneficiaries.

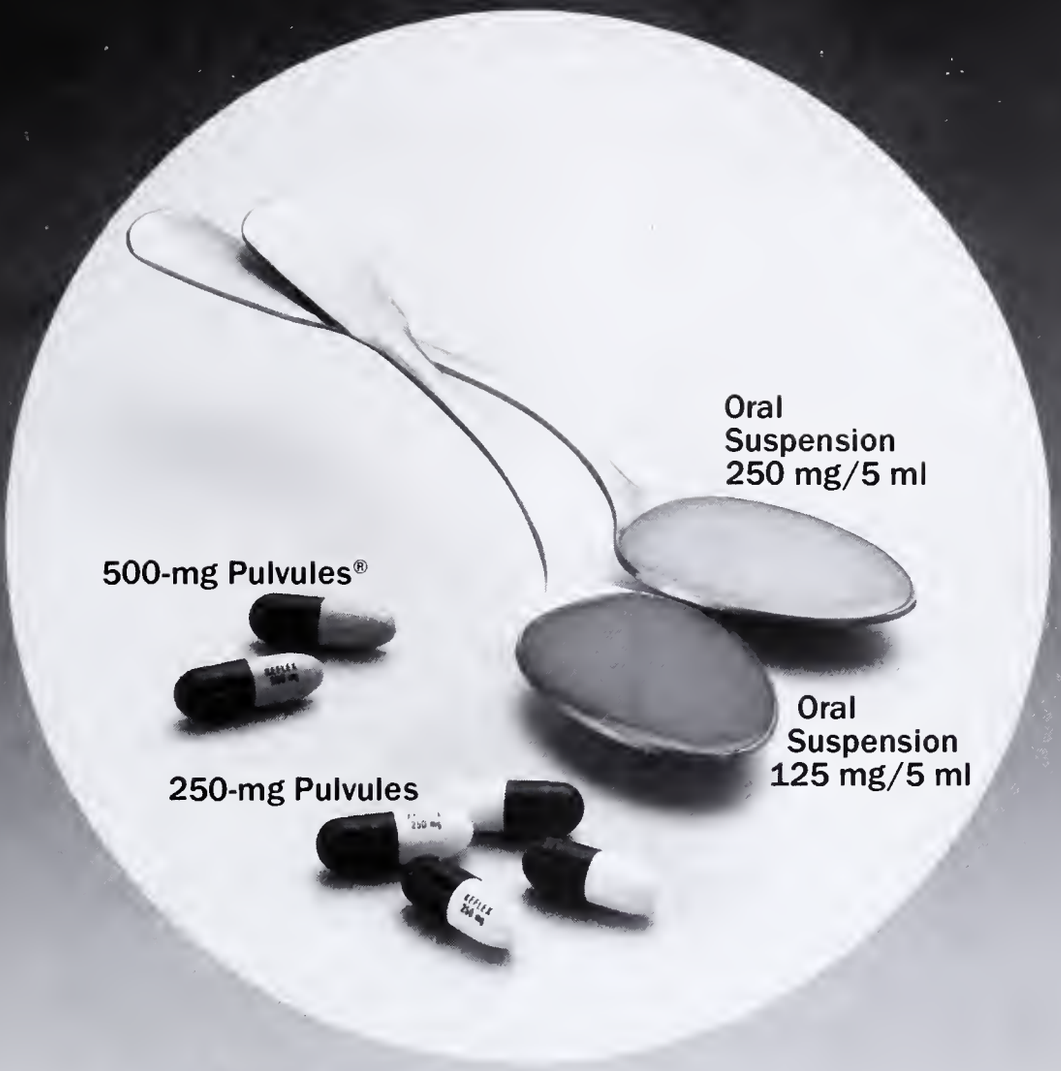
Medicare-covered patients deserve more than second-class medical care. The plaintiffs are intent on seeing that this faulty statutory scheme does not continue.

DONALD P. "ROCKY" WILCOX, JD
TMA General Counsel

REFERENCES

1. AMA, TMA, et al v Bowen, CA-5–86–273 (USD Ct Northern Dist of Texas Lubbock Div) Dec 1986, transferred to the Dallas Div on Dec 30, 1986 (CA-3–86–3181-H).

Easy To Take



Keflex®
cephalexin

Additional information
available to the profession
on request.

DISTA

420113

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd. by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

© 1987, Pfizer Inc.

VERYTHING

Effective control time and time again[1]

Effective control of fasting and postprandial glucose—patient after patient, meal after meal, year after year.

Insulin when it's needed

Insulin levels are rapidly elevated in response to a meal, then return promptly to basal levels after the meal challenge subsides.

Timed to minimize risks

Rapidly metabolized and excreted, with an excellent safety profile.[1] As with all sulfonylureas, hypoglycemia may occur.

In concert with diet in non-insulin-dependent diabetes mellitus

Glucotrol®

(glipizide) 5-mg and 10-mg Scored Tablets

SYNCHRONIZED SULFONYLUREA THERAPY

Please see brief summary of Glucotrol® (glipizide) prescribing information on next page.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Reference:
1. Sachs R, Frank M, Fishman SK. Overview of clinical experience with glipizide. In *Glipizide. A Worldwide Review*. Princeton, NJ: Excerpta Medica, 1984, pp 163-172

GLUCOTROL® (glipizide) Tablets
Brief Summary of Prescribing Information

INDICATIONS AND USAGE: GLUCOTROL is indicated as an adjunct to diet for the control of hyperglycemia in patients with non-insulin-dependent diabetes mellitus (NIDDM, type II) after an adequate trial of dietary therapy has proved unsatisfactory.

CONTRAINDICATIONS: GLUCOTROL is contraindicated in patients with known hypersensitivity to the drug or with diabetic ketoacidosis, with or without coma, which should be treated with insulin.

SPECIAL WARNING ON INCREASED RISK OF CARDIOVASCULAR MORTALITY: The administration of oral hypoglycemic drugs has been reported to be associated with increased cardiovascular mortality as compared to treatment with diet alone or diet plus insulin. This warning is based on the study conducted by the University Group Diabetes Program (UGDP), a long-term prospective clinical trial designed to evaluate the effectiveness of glucose-lowering drugs in preventing or delaying vascular complications in patients with non-insulin-dependent diabetes. The study involved 823 patients who were randomly assigned to one of four treatment groups (*Diabetes*, 19, supp. 2:747-83D, 197D).

UGDP reported that patients treated for 5 to 8 years with diet plus a fixed dose of tolbutamide (1.5 grams per day) had a rate of cardiovascular mortality approximately 2-1/2 times that of patients treated with diet alone. A significant increase in total mortality was not observed, but the use of tolbutamide was discontinued based on the increase in cardiovascular mortality, thus limiting the opportunity for the study to show an increase in overall mortality. Despite controversy regarding the interpretation of these results, the findings of the UGDP study provide an adequate basis for this warning. The patient should be informed of the potential risks and advantages of GLUCOTROL and of alternative modes of therapy.

Although only one drug in the sulfonylurea class (tolbutamide) was included in this study, it is prudent from a safety standpoint to consider that this warning may also apply to other oral hypoglycemic drugs in this class, in view of their close similarities in mode of action and chemical structure.

PRECAUTIONS: Renal and Hepatic Disease: The metabolism and excretion of GLUCOTROL may be slowed in patients with impaired renal and/or hepatic function. Hypoglycemia may be prolonged in such patients should it occur.

Hypoglycemia: All sulfonylureas are capable of producing severe hypoglycemia. Proper patient selection, dosage, and instructions are important to avoid hypoglycemia. Renal or hepatic insufficiency may increase the risk of hypoglycemic reactions. Elderly, debilitated or malnourished patients and those with adrenal or pituitary insufficiency are particularly susceptible to the hypoglycemic action of glucose-lowering drugs. Hypoglycemia may be difficult to recognize in the elderly or people taking beta-adrenergic blocking drugs. Hypoglycemia is more likely to occur when caloric intake is deficient, after severe or prolonged exercise, when alcohol is ingested, or when more than one glucose-lowering drug is used.

Loss of Control of Blood Glucose: A loss of control may occur in diabetic patients exposed to stress such as fever, trauma, infection or surgery. It may then be necessary to discontinue GLUCOTROL and administer insulin.

Laboratory Tests: Blood and urine glucose should be monitored periodically. Measurement of glycosylated hemoglobin may be useful.

Information for Patients: Patients should be informed of the potential risks and advantages of GLUCOTROL, of alternative modes of therapy, as well as the importance of adhering to dietary instructions, of a regular exercise program, and of regular testing of urine and/or blood glucose. The risks of hypoglycemia, its symptoms and treatment, and conditions that predispose to its development should be explained to patients and responsible family members. Primary and secondary failure should also be explained.

Drug Interactions: The hypoglycemic action of sulfonylureas may be potentiated by certain drugs including nonsteroidal anti-inflammatory agents and other drugs that are highly protein bound, salicylates, sulfonamides, chloramphenicol, probenecid, coumarins, monoamine oxidase inhibitors, and beta adrenergic blocking agents. *In vitro* studies indicate that GLUCOTROL binds differently than tolbutamide and does not interact with salicylate or dicumarol. However, caution must be exercised in extrapolating these findings to a clinical situation. Certain drugs tend to produce hyperglycemia and may lead to loss of control, including the thiazides and other diuretics, corticosteroids, phenothiazines, thyroid products, estrogens, oral contraceptives, phenytoin, nicotinic acid, sympathomimetics, calcium channel blocking drugs, and isoniazid. A potential interaction between oral miconazole and oral hypoglycemic agents leading to severe hypoglycemia has been reported. Whether this interaction also occurs with the intravenous, topical, or vaginal preparations of miconazole is not known.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A 20-month study in rats and an 18-month study in mice at doses up to 75 times the maximum human dose revealed no evidence of drug-related carcinogenicity. Bacterial and *in vivo* mutagenicity tests were uniformly negative. Studies in rats of both sexes at doses up to 75 times the human dose showed no effects on fertility.

Pregnancy: Pregnancy Category C. GLUCOTROL (glipizide) was found to be mildly fetotoxic in rat reproductive studies at all dose levels (5-50 mg/kg). This fetotoxicity has been similarly noted with other sulfonylureas, such as tolbutamide and tolazamide. The effect is perinatal and believed to be directly related to the pharmacologic (hypoglycemic) action of GLUCOTROL. In studies in rats and rabbits no teratogenic effects were found. There are no adequate and well controlled studies in pregnant women. GLUCOTROL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Because recent information suggests that abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital abnormalities, many experts recommend that insulin be used during pregnancy to maintain blood glucose levels as close to normal as possible.

Nonteratogenic Effects: Prolonged severe hypoglycemia has been reported in neonates born to mothers who were receiving a sulfonylurea drug at the time of delivery. This has been reported more frequently with the use of agents with prolonged half-lives. GLUCOTROL should be discontinued at least one month before the expected delivery date.

Nursing Mothers: Since some sulfonylurea drugs are known to be excreted in human milk, insulin therapy should be considered if nursing is to be continued.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: In controlled studies, the frequency of serious adverse reactions reported was very low. Of 702 patients, 11.8% reported adverse reactions and in only 1.5% was GLUCOTROL discontinued.

Hypoglycemia: See PRECAUTIONS and OVERDOSAGE sections.

Gastrointestinal: Gastrointestinal disturbances, the most common, were reported with the following approximate incidence: nausea and diarrhea, one in 70; constipation and gastralgia, one in 100. They appear to be dose-related and may disappear on division or reduction of dosage. Chloestatic jaundice may occur rarely with sulfonylureas. GLUCOTROL should be discontinued if this occurs.

Dermatologic: Allergic skin reactions including erythema, morbilliform or maculopapular eruptions, urticaria, pruritus, and eczema have been reported in about one in 70 patients. These may be transient and may disappear despite continued use of GLUCOTROL; if skin reactions persist, the drug should be discontinued. Porphyria cutanea tarda and photosensitivity reactions have been reported with sulfonylureas.

Hematologic: Leukopenia, agranulocytosis, thrombocytopenia, hemolytic anemia, aplastic anemia, and pancytopenia have been reported with sulfonylureas.

Metabolic: Hepatic porphyria and disulfiram-like alcohol reactions have been reported with sulfonylureas. Clinical experience to date has shown that GLUCOTROL has an extremely low incidence of disulfiram-like reactions.

Endocrine Reactions: Cases of hyponatremia and the syndrome of inappropriate antidiuretic hormone (SIADH) secretion have been reported with this and other sulfonylureas.

Miscellaneous: Dizziness, drowsiness, and headache have been reported in about one in fifty patients treated with GLUCOTROL. They are usually transient and seldom require discontinuance of therapy.

OVERDOSAGE: Overdosage of sulfonylureas including GLUCOTROL can produce hypoglycemia. If hypoglycemic coma is diagnosed or suspected, the patient should be given a rapid intravenous injection of concentrated (50%) glucose solution. This should be followed by a continuous infusion of a more dilute (10%) glucose solution at a rate that will maintain the blood glucose at a level above 100 mg/dL. Patients should be closely monitored for a minimum of 24 to 48 hours since hypoglycemia may recur after apparent clinical recovery. Clearance of GLUCOTROL from plasma would be prolonged in persons with liver disease. Because of the extensive protein binding of GLUCOTROL (glipizide), dialysis is unlikely to be of benefit.

DOSAGE AND ADMINISTRATION: There is no fixed dosage regimen for the management of diabetes mellitus with GLUCOTROL, in general, it should be given approximately 30 minutes before a meal to achieve the greatest reduction in postprandial hyperglycemia.

Initial Dose: The recommended starting dose is 5 mg before breakfast. Geriatric patients or those with liver disease may be started on 2.5 mg. Dosage adjustments should ordinarily be in increments of 2.5-5 mg, as determined by blood glucose response. At least several days should elapse between titration steps.

Maximum Dose: The maximum recommended total daily dose is 40 mg.

Maintenance: Some patients may be effectively controlled on a once-a-day regimen, while others show better response with divided dosing. Total daily doses above 15 mg should ordinarily be divided.

HOW SUPPLIED: GLUCOTROL is available as white, dye-free, scored diamond-shaped tablets imprinted as follows: 5 mg tablet—Pfizer 411 (NDC 5 mg 0049-4110-66) Bottles of 100, 10 mg tablet—Pfizer 412 (NDC 10 mg 0049-4120-65) Bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.

More detailed professional information available on request.

ROERIG Pfizer A division of Pfizer Pharmaceuticals
New York, New York 10017

© The Advertising Council, 1985

A Public Service Message Ad Council U.S. Department of Transportation

Reducing your collection costs

"My collections rate is 95%," says one family practitioner.

"Gee, mine is only 90%," says his ob/gyn neighbor.

Yet that FP and that ob/gyn practitioner didn't count two things:

1. The cost of collecting.
2. How long their money was tied up.

If it costs you 3% of your gross billings to maintain a 95% collections rate and it takes you about 4 months to collect that money, then you are not much better off than the physician whose 90% collections may cost only 1% and who takes about 45 days to collect his money.

You should collect for office visits when the service is rendered. This is my opinion as well as that of my colleagues and of many experienced physicians. The logic is simple: If your office visit charge is $30 and it takes four statements to collect at an average cost of 75 cents per statement, then two things follow:

1. It's costing you $3 (or 10%) to collect your $30.
2. You don't get *your* money for 120 days.

Therefore, you can *significantly reduce your collections costs* and *increase your cash flow* (get monies in faster than previously) by improved office-visit collections.

How do you go about this?

1. DOCTOR INVOLVEMENT. Ask the patient to pay: "Mrs Smith, please pay Susan on your way out."

2. CHARGE TICKETS. Give the patient a charge slip on which you write a specific dollar charge ($30—not a code) for the service rendered. In this way, the patient *sees* the charge and is more prepared to pay. A good charge slip has preprinted spaces for "office visit," "lab," "injections," and so forth, next to which you can write in specific dollar amounts.

3. A PLACE TO PAY. Patients are reluctant to pay at a reception window in front of other waiting patients. Have a more private counter or desk at which patients can pay and make new appointments on the way out and out of view of the reception room.

4. THE "RIGHT" EMPLOYEE AND THE "RIGHT" WORDS. The right employee is the one who can ask for money. All she has to say is: "Mrs Smith, the charge for today's visit is $30." If the patient says: "Bill me," your employee prepares a statement on the spot, gives it to the patient (with an envelope with your address preprinted) and says:

"Mrs Smith, we like to be paid for office visits when the service is rendered, and I know you'll remember this on your next visit. Meanwhile, here's your statement and a return envelope. This way you can send your check when you get home. Thanks a lot."

5. PREPARING THE PATIENT. I don't like signs in physicians' offices. I do like good communications. Therefore, you might better prepare the patients to pay by putting a boxed-in notice at the bottom of the patient information sheet you have new patients complete (name, address, name of spouse, employer, insurance companies and policy numbers). It could simply say:

OUR FEE POLICY: To help control costs, we ask our patients to pay for their office visits at the time the service is rendered.

You *can* increase your cash flow and decrease the cost of collecting by following the simple five steps outlined here.

Please note that the first step is *yours*.

GEORGE S. CONOMIKES
President, Conomikes Associates, Inc, 4270 Promenade Way, Marina del Rey, CA 90292.

This article has appeared in the *LACMA Physician*, journal of the Los Angeles County Medical Society, and is reprinted with permission.

During the past 5 years, more than $30 billion has been cut from Medicare and Medicaid. Now the Administration wants to cut $50 billion more.

Isn't it time we started defending the home front

We're all concerned about the federal budget deficit. But we should insist on the need for a balanced solution to the problem. The continuing effort to cut public health care programs disproportionately is *not* a solution.

Defense and health care: a better balance

For the past five years, Medicare and Medicaid have been cut at a rate nearly double their share of total federal expenditures. And all the while, our senior citizen population is growing rapidly. Meanwhile, defense spending has increased significantly. Now the Administration wants to squeeze even more from Medicare and Medicaid.

Before we go along with this latest budget proposal, shouldn't we stop to consider whether the Administration is bleeding the life out of America's health care system?

Let's consider the consequences

Continued budget cutting will not only reduce the quality of care for today's senior citizens, but for all of us. Unless Congress rejects this latest Administration proposal, the consequences could be devastating. Consider:

- **Less care available for those in need;**
- **A reduction in funds needed for life-saving technologies;**
- **More pressure to restrict access to hospital care;**
- **Higher out-of-pocket costs for everyone.**

The quality of medical care—a our access to it—must not be compromised. A strong defense is vital, but should it be supported at t expense of our senior citizens and our nation's health?

We must say ***no*** *to further Medicare and Medicaid* budget cu Now's the time to defend health ca on the home front.

Health care: it's worth protectin

AARP AMERICAN ASSOCIATION OF RETIRED PERSONS
1909 K Street, NW
Washington, D.C. 20049

AHA AMERICAN HOSPITAL ASSOCIATION
Capitol Place,
50 F Street, NW
Suite 1100
Washington, D.C. 20001

AMERICAN MEDICAL ASSOCIATION
Washington Office
1101 Vermont Avenue, NW
Washington, D.C. 20005

AMERICAN NURSES ASSOCIATION
Washington Office
1101 14th Street, NW
Suite 200
Washington, D.C. 20005

Federation of American Health Syste
1111 19th St., NW
Washington, D.C. 20036

P.E. Geers
Paul Edgar Geers, MD, a physician in Whitewright, Tex, for 31 years, died Oct 4, 1986. He was 65.

Dr Geers was born in Annona, Tex. He was a student at Paris Junior College when he was called to active duty with the 36th Division Texas National Guard in 1940. Injured during World War II, Dr Geers was decorated with the Purple Heart and retired as a captain in 1947. In 1954 he was graduated from The University of Texas Medical Branch at Galveston. After an internship at El Paso General Hospital, Dr Geers began his medical practice in Whitewright in 1955.

In 1982 Dr Geers was recognized as the Handicapped Person of the Year for the State of Texas and as an oustanding physician of the state by the Texas Medical Association.

Surviving family members include his wife, Rosalie Geers, Whitewright; daughters, Paula King, Richardson, Tex; Brenda McKinney, Winnsboro, Tex; and Jeanette Bowen and Kay Geers, both of Whitewright; son, Tony Geers, Iowa, La; brothers, Louis Geers, Longview, Tex; Jessie Geers, California; and Otis Geers, Odessa, Tex; sisters, Margaret Rose, Clarksville, Tex, and Tressie Laminack, McKinney, Tex; and eight grandchildren.

R. Hanna
Ralph Hanna, MD, a longtime Austin pediatrician, died Nov 30, 1986. He was 75.

Born in Tularosa, NM, Dr Hanna graduated from The University of Texas Medical Branch at Galveston in 1937. His internship and residency in pediatrics were at Los Angeles County Hospital (1937–1941). During 1941-1943, Dr Hanna served as a part-time school physician for the Los Angeles City Board of Education and part-time instructor in pediatrics at the College of Medical Evangelists. After serving in the US Army from 1943 until 1946, Dr Hanna began a private practice of pediatrics in Austin. He also was a lecturer in special education at The University of Texas. He retired in 1983.

Dr Hanna was a past president and chairman of the board of United Cerebral Palsy of Texas and regional vice president of United Cerebral Palsy, Inc, New York. He was a past president of the Austin-Travis County Mental Health and Mental Retardation Center.

Surviving family members include his wife, Marie Hanna, Austin; sons, Ralph Hanna III, Riverside, Calif, and Henry M. Hanna, Austin; daughter, Leila Hanna Carp, Columbia, Md; and nine grandchildren.

S. Hedberg
Susan Hedberg, MD, 42, a Fort Worth internist and rheumatologist, died Nov 30, 1986.

Dr Hedberg, a Chicago native, graduated from Macalester College in St Paul, Minn, in 1967 and the University of Minnesota Medical School in Minneapolis in 1971. Her internship, residency, and a fellowship in rheumatology were at Albany (NY) Medical College. After working at the Whitney Young Health Center in Albany for a year, Dr Hedberg moved to Fort Worth in 1976. She was president of the board of directors at the Medical Surgical Clinic there.

She is survived by her husband, Rick Gabel, Fort Worth, and brother, Douglas Hedberg, Minneapolis.

H.W. Huntington
Howard W. Huntington, MD, a neuropathologist at Scott and White Clinic in Temple, died Nov 12, 1986. He was 51.

Dr Huntington was born in Longview, Wash. He received a bachelor of arts degree from St Olaf College in Northfield, Minn, and a medical degree from the University of Washington School of Medicine in Seattle. He served residencies in pathology, neuropathology, and neurology. His training in neuropathology was at the Barrow Neurological Institute in Phoenix, and the Albert Einstein College of Medicine in the Bronx, New York. Dr Huntington was a captain in the US Army assigned to the laboratory service at Brooke Army Medical Center, Fort Sam Houston, Texas. He practiced pathology in Portland, Ore, where he also was associated with the University of Oregon Medical School. He later became chief of the neuropathology laboratory, Audie L. Murphy Memorial Veterans Hospital, and associate professor of pathology, The University of Texas Health Science Center at San Antonio. In 1982 he became chief of the neuropathology section at Scott and White Memorial Hospital and Clinic and professor of pathology at Texas A&M University College of Medicine.

He is survived by his wife, Georgia (Jo) Lindsey Huntington; daughters, Deborah Huntington, Laura Huntington, and Sheila Huntington, all of Temple; and brother, David Huntington, Port Angeles, Wash.

A.B. Lunin
Arthur B. Lunin, MD, a Houston obstetrician-gynecologist, died Nov 19, 1986. He was 68.

Dr Lunin was born in New York City and was a 1942 graduate of Tulane University School of Medicine in New Orleans. After an internship at Long Island College Hospital in Brooklyn, NY, and a residency at Charity Hospital in New Orleans, Dr Lunin moved to Houston in 1950.

Surviving family members include Dr Lunin's wife, Fanchon Messina Lunin; son, Cary; daughters, Fanchon, Maun, and Ilona; and two grandsons.

M.M. Stephens
Mollie Marie Stephens, MD, 66, Pasadena, died Nov 28, 1986. Dr Stephens practiced pediatrics in Pasadena for 32 years.

She was born in Arkansas and received her premedical education at the University of Arkansas at Fayetteville. In 1950 she graduated from the University of Arkansas School of Medicine in Little Rock. After completing an internship and pediatric residency at The University of Texas Medical Branch at Galveston, Dr Stephens began a private practice in Pasadena. She retired in 1984.

Survivors include her daughter, Jacque Traxler, Pasadena; son, Dr Maurice Stephens, Mena, Ark; brother, Donald E. Chambers, Houston; and six grandchildren.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

P. E. GEERS
Whitewright, 1921–1986

R. HANNA
Austin, 1911–1986

S. HEDBERG
Fort Worth, 1944–1986

H. W. HUNTINGTON
Temple, 1934–1986

A. B. LUNIN
Houston, 1918–1986

M. M. STEPHENS
Pasadena, 1920–1986

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audiovisual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student $ 5.00 ☐ Patron $ 100.00
☐ Sustaining $15.00 ☐ Life $1,000.00
☐ Subscribing $25.00

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1986 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Aloan CA: *Respiratory Care of the Newborn. A Clinical Manual.* Philadelphia, J.B. Lippincott Company, 1987.

Ariel IM, Cleary JB: *Breast Cancer. Diagnosis & Treatment.* New York, McGraw-Hill Book Company, 1987.

Ash MM Jr: *Kerr and Ash's Oral Pathology. An Introduction to General and Oral Pathology for Hygienists,* ed 5. Philadelphia, Lea & Febiger, 1986.

Birrer RB, Brecher DB: *Common Sports Injuries in Youngsters.* Oradell, NJ, Medical Economics Books, 1987.

Bles W, Brandt T (eds): *Disorders of Posture and Gait.* New York, Elsevier, 1986.

Blum BI: *Clinical Information Systems.* New York, Springer-Verlag, 1986.

Dirks JH, Sutton RAL (eds): *Diuretics. Physiology, Pharmacology & Clinical Use.* Philadelphia, W.B. Saunders Company, 1986.

Farber L: *Personal Money Management for Physicians,* ed 4. Oradell, NJ, Medical Economics Books, 1986.

Golding J, Limerick S, Macfarlane A: *Sudden Infant Death. Patterns, Puzzles and Problems.* Seattle, University of Washington Press, 1985.

Graham SD (ed): *Urologic Oncology.* New York, Raven Press, 1986.

Hamdy RC: *Geriatric Medicine. A problem-oriented approach.* Philadelphia, Baillière Tindall, 1984.

Huston P: *Insurance Strategies for Physicians.* Oradell, NJ, Medical Economics Books, 1983.

Khafif RA, Rafla S, Kopel S (eds): *Current Guidelines for the Management of Cancer.* Orlando, Fla, Academic Press, Inc, 1986.

Kittle CF: *Mesothelioma: Diagnosis and Management.* Chicago, Year Book Medical Publishers, Inc, 1987.

Lahita RG (ed): *Systemic Lupus Erythematosus.* New York, John Wiley & Sons, 1987.

Letourneau JG, Elyaderani MK, Castañeda-Zuñiga: *Percutaneous Biopsy, Aspiration and Drainage.* Chicago, Year Book Medical Publishers, Inc, 1987.

Litwin MS (ed): *Atlas of Advanced Surgery.* New York, Yorke Medical Books, 1986.

Lumley JSP: *Color Atlas of Vascular Surgery.* Baltimore, Williams & Wilkins, 1986.

Metcalfe J, McAnulty JH, Ueland K: *Burwell and Metcalfe's Heart Disease and Pregnancy: Physiology and Management,* ed 2. Boston, Little, Brown and Company, 1986.

Missri J: *Clinical Doppler Echocardiography.* New York, Yorke Medical Books, 1986.

Phelps CD, Kolder HEJW (eds): *Manual of Common Ophthalmic Surgical Procedures.* New York, Churchill Livingstone, 1986.

Pillemer KA, Wolf RS (eds): *Elder Abuse. Conflict in the Family.* Dover, Mass, Auburn House Publishing Company, 1986.

Porter RW: *Management of Back Pain.* New York, Churchill Livingstone, 1986.

Rost R: *Athletics and the Heart.* Chicago, Year Book Medical Publishers Inc, 1987.

Samman PD, Fenton DA: *The Nails in Disease.* Chicago, Year Book Medical Publishers Inc, 1986.

Schwartz MW (ed): *Principles and Practice of Clinical Pediatrics.* Chicago, Year Book Medical Publishers, Inc, 1987.

Shah NS, Donald AG (eds): *Movement Disorders.* New York, Plenum Medical Book Company, 1986.

Swanson NA: *Atlas of Cutaneous Surgery.* Boston, Little, Brown and Company, 1987.

Tabbara KF, Hyndiuk RA (eds): *Infections of the Eye.* Boston, Little, Brown and Company, 1986.

Vlietstra RE, Holmes DR Jr: *Percutaneous Transluminal Coronary Angioplasty.* Philadelphia, F.A. Davis Company, 1987.

Zilbergeld B, Edelstien MG, Araoz DL (eds): *Hypnosis. Questions & Answers.* New York, W.W. Norton & Company, 1986.

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
DIRECTOR-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY

James A. Knight, MD
PSYCHIATRY

R. John Prevost, MS
AIR POLLUTION

Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES

John A. Thomas, PhD
BIOMETRICS

Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES

Hester Beth Bland, HSD
HEALTH EDUCATION

George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

A. J. LANIER, JR, MD
Diplomate American Board of Anesthesiology

Cervical, thoracic, and lumbar epidural steroid injection, cervical sympathetic, celiac plexus, and lumbar sympathetic blocks, differential spinal and neurolytic nerve blocks.

8350 Meadow Road, #250, Dallas, Texas 75231; 214 691-6885

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology

Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic

7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7558

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Somnai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
Colon and Rectal Surgery Colonoscopy
Laser Hemorrhoidectomy, Out-patient or In-patient

Barnett Tower, Baylor Medical Plaza, 3600 Gaston Avenue, Suite 411, Dallas, Texas 75246; 214 821-4300, 350-2441
122 W. Colorado, Dallas, Texas 75208; 214 942-8734

Representing the Profession

. . . Another service of your association

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP
Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD
Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO
James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS
David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY
For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY
Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA
Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism
Practice Limited to Endocrinology & Diabetes
5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service
. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE
David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS
Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD
Diplomate American Board of Orthopaedic Surgery
DAVID J. ZEHR, MD—Microsurgery
ARNOLD V. DiBELLA, MD
Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA
Diplomates American Board of Orthopaedic Surgery
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS
Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops
. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery

JACINTO ZAMBRANO, MD
Surgery of the Hand

30th & Red River, Austin, Texas 7B704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

B03 West Terrell, Fort Worth, Texas 76104
Telephone B17 B77-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3B00 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 B23-7090
Medical City Dallas II, 7777 Forest Lane, Suite B116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 770B2; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Dinlomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 B26-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD

920 South Lake, Fort Worth, Texas 76104
Telephone B17 336-0551

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
W. Robert Hudgins, MD
Richard H. Jackson, MD
Mark J. Cwikla, MD
Casey E. Patterson, MD (Retired)

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620, Dallas, Texas 75235; 214 637-0420

B210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905; Dallas, Texas 75231; 214 369-7596

1302 Lane St., Copper Tree Medical Center, Suite 300, Irving, Texas 75062; 214 259-476B

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA
Diplomates of the American Board of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

TMA HealthWise Series
. . . Another service of your association

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Computerized Tomography

John T. O'Neal, MD, Neurosurgery
Robert D. Schneider, MD, Neurology and Electroencephalography
Steven K. Crouse, MD, Neurology and Electroencephalography

Murchison Medical Bldg., Suite 307
1B10 Murchison Drive, El Paso, Texas 79902
Telephone 915 532-B901

ARLINGTON ASSOCIATION OF NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 77054
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology. Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

TMA Action monthly newsletter

. . . Another service of your association

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES

Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or B00 B72-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 821-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2B11 Lemmon Ave. E, Dallas, Texas 75204
214 521-11S3; 1-800-442-5376

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-BB41

12121 Richmond Ave., Suite 317, Houston, Texas 770B2
713 556-5757

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 78205; 512 226-5191

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-B00-B33-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; B17 332-6200

TMA Physician Membership Directory
. . . Another service of your association

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS
Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD
John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2B55 Gramercy, Houston, Texas
77025; 713 66B-6B28

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas
77057; 713 7B2-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

Heights Medical Eye Center, 53S West 20th Street, Houston, Texas 7700B;
713 B62-6631

BRAZOSPORT EYE INSTITUTE

Frank J. Grady, MD, PhD, FACS

Surgical Correction of Nearsightedness and Astigmatism

103 Parking Way, Lake Jackson, Texas 77566; 1-800-392-0091

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Shubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

91B Bth Avenue, Fort Worth, Texas; B17 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

TMA Physicians Benevolent Fund
. . . Another service of your association

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 112B, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA

ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES

Dorothy Patras, MD

Anatomic Pathology and Consultation in Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.

J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

TMA Memorial Library

. . . Another service of your association

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD

Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

WILLIAM E. BARNES, MD

Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; B06 792-2313

STEPHEN C. LESAUVAGE, MD
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-B296

PLASTIC SURGERY CLINIC OF AUSTIN
Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery
Jacinto Zambrano, MD
Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery
30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.
John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES
302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 7B229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD
Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD
Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS
Excellence in Form & Function
Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 558-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

PSYCHIATRY

GONZALO A. AILLON, MD
Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD
Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
B220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

Representing TMA's legislative views
. . . Another service of your association

C. MARSHALL BRADSHAW, MD, PA
Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone B17 335-9409

TIMBERLAWN PSYCHIATRIC HOSPITAL
Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 7522B
214 381-71B1

DALLAS PSYCHIATRIC ASSOCIATES
A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

TMA 1987 Calendar of Events

Annual Session, Houston, May 13-17

Fall Conference, Austin, September 26

Interim Session, Austin, November 20-21

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. 8urk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. 5teven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American 8oard of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 8eechnut
Houston, Texas 77074

713 776-S622 Day Phone
713 776-S170 Night and Weekends

Carlos H. Fernandez, MD
Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP
Diplomate American 8oards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS
Diplomates American Board of Surgery and 8oard of Thoracic 5urgery
*Also certificate of special qualification in general vascular surgery, American 8oard of 5urgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, 8arnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours 8y Appointment

REGIONAL CARDIOVASCULAR CENTER
Cardiac, Vascular and Thoracic Surgery
Mario O. Kapusta, MD
Phillip R. Adams, MD
925 E. Dawson, Tyler, Texas 75701
214 593-9022

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. 8egley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American 8oard of Urology

8ox 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA
Diplomate of the American 8oard of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS
Diplomate, American Board of Urology

Adult and Pediatric Urology
Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES
Adult and Pediatric Urology

Ted 8oone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology
221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Wanted—Dallas metro area physicians who have a Texas license to help with pre-enlistment physicals. Full-time pays $36,889 to $45,367 with Government benefits. Part-time pays daily rate of $125 for morning work. 214 767-5211 or 5212.

Physician—$56,856 plus up to $3,000 additional compensation subject to approval. Group health insurance plus all state benefits including retirement. Must be licensed in Texas as MD or DO. Contact Mexia State School, P.O. Box 1132, Mexia, Texas 76667. Phone 817 562-2821. An equal opportunity/affirmative action employer and does not discriminate against the handicapped.

West Texas—Big Spring State Hospital. Psychiatrist, child psychiatrist and general physician positions available, board certified or eligible. Texas license required. JCAH fully accredited facility. Excellent benefit package including 40-hour work week, malpractice protection, retirement, and tax-sheltered income program. Beautiful, friendly sunbelt location. City of 25,000 with good schools and excellent housing. Contact Superintendent, Big Spring State Hospital, P.O. Box 231, Big Spring, Texas 79721-0231; 915 267-8216. An EO/AAE.

Director of the Student Health Center, The University of Texas at Austin—The University of Texas at Austin is seeking applications for the position of Director of the Student Health Center. The Director reports to the Vice President for Student Affairs through an associate Vice President. The primary function of the Director consists of overall accountability for delivery of quality primary care and vigorous health education outreach programs for 46,000 students. Will plan, organize, implement, and evaluate health related programs and administrative processes. Position requires a master's degree in Business Administration or Hospital Administration, or Doctor of Medicine. Also requires five years' senior level health administration experience as well as expertise in management and communication issues encountered in university settings. The University expects to fill this position no later than July 1, 1987. Candidates should forward a letter of application, current resume, and three references by April 15, 1987, to: Search Committee, The University of Texas at Austin, Student Health Center, P.O. Box 7339, University Station, Austin, Texas 78712-7339. The University of Texas at Austin is an equal opportunity/affirmative action employer.

Two Psychiatrists and One General Physician—Openings for staff psychiatrists in largely geropsychiatric, JCAH and Medicare accredited hospital and for director, 27 bed, Substance Abuse Unit. Will consider a general physician for Substance Abuse Unit if knowledge and experience satisfactory. Total salary for psychiatrists up to $72,304 and up to $65,000 for general physicians, depending on qualifications. Total patient population from 430 to 450. 19-member medical staff includes nine psychiatrists and two neurologists. Excellent location in the Texas Hill Country, one hour from San Antonio. Good fringe benefits. Must have Texas license. Call or write G. W. Harrelson, Jr., MD, Director of Psychiatric Services, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78029-1468; 512 896-2211. We are an equal opportunity employer.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Emergency Medicine—Full and part-time positions available in emergency department and clinics for qualified physician seeking lucrative employment opportunity. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Jane Reid, Staffing Specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, New York 11803; 1-800-645-4848.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Expanding 21 physician multispecialty group has two openings: Pediatrician and Active Family Practitioner. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 W 11th Place, Big Spring, Texas 79720.

Attention Gen/FP (including those with semi-retirement thoughts). Practice opportunity available on beautiful Lake Whitney located in Central Texas. Office space (new) and personnel furnished for up to one year. This offer is well suited for any level of practice so desired. Immediate area affords excellent deer, duck, dove and quail hunting. Good fishing and water recreation at front door. Reply in confidence to P.O. Box 458, Whitney, Texas 76692.

Family practice situation available for BC/BE, competent, family practice/general surgeon. Work in a clinic with adjoining small JCAH hospital with very excellent salary guarantee. Conveniently located in east Houston near the heavy industrial complex on the ship channel. See minor office surgical procedures from industrial injuries and private patients alike. Cryosurgery, mammogram, endoscopies, some HMO activity. Permanent position, fee-for-service, with free office space and nurse provided through the first year. An even better deal after first year. For further details, send CV or contact: John W. Nichols, MD, or Deaton Hospital, Inc., 208 North Main Street, Galena Park, Texas 77547; 713 672-6311.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Doctor wanted for Crowell County seat town located on US highway near Wichita Falls. Excellent guarantee. Clinic next door to 24-bed tax supported hospital. Farming, ranching, oil and gas community very supportive of hospital and clinic. Call Jerry Lewis, 817 776-4121, for more information.

Family practice physician, board certified or eligible, to locate south of Fort Worth. Excellent opportunities for this active growing facility. Great benefits with competitive incentives as well as free time. Reply in confidence to: B. Craig Nelon, DO, or Wm. A. Thomas, Jr., DO, 344 SW Wilshire Blvd., Burleson, Texas 76028 or call 817 447-1208.

Near Dallas—FP group seeks full time associate for satellite office in underserved area (within 15 minutes of hospital). Urgent need for family physician. OB preferred. Modern, 150-bed hospital. Shared call. Very lucrative practice potential; generous incentive package. Excellent lifestyle. Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Lucrative private practice within one hour of San Antonio. Modern hospital, new professional office building adjacent to hospital. No evening or weekend ER call required. Share call with young, BC family physician. OB required. Hunting mecca. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Within one hour of Austin. Young, board certified family physicians seek associate for fee-for-service group practice in young, progressive community of 5,600. Modern hospital. Excellent, award-winning schools; organized sports; strong industry. Competitive incentive package. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Physician needed for family practice minor emergency clinic. Modern, well equipped clinic in East Texas lakes area. $25/hr., sleeping accommodations. Contact Linda at 409 634-8343.

Family Physician, BC/BE—Recruiting physicians interested in permanent and professionally stimulating unique family practice group. Excellent salary and generous benefits. Eligibility for partnership/shareholding after one year. Extensive support system and modern facilities. An opportunity to practice free of business worries. Locational opportunities and medical center nearby. Send CV to Park Avenue Private Physicians, Inc., P.O. Box 441292, Houston, Texas 77244; 713 668-4600.

Internal Medicine

General internist wanted to join busy North Dallas-Richardson practice. Associate retiring. Excellent opportunity for a well qualified internist with a desire for long term commitment. If you would like to become a respected member of this community, send your CV to George M. Markus, MD, 2175 Promenade Center, Richardson, Texas 75080; telephone 214 235-2304.

Internist, board certified or eligible, needed for thriving private practice, in Lawton, OK, the mountain city. Guaranteed, more than competitive, salary leading to a possible partnership for the right doctor. We encourage all doctors, female and male, who want to practice good, aggressive, preventative medicine to apply for this prime position. Please send CV to Park Ridge Professional Center, 1303 S.W. Park Ridge Blvd., Suite B, Lawton, Oklahoma 73505.

General internists seek BE/BC associate for established, fee-for-service private practice in medium-sized community near Dallas/Fort Worth. Gastroenterology or pumonary subspecialty desirable. Excellent lifestyle in area with strong, diversified economy. Incentive package available. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Internal Medicine—General BC/BE needed to associate with a solo practitioner located near Dallas. Excellent income, potential, and fringe benefits. Send CV to: ICCB, P.O. Box 835973, Richardson, Texas 75083-5793.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

OBG physician for 10 member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Pediatrics

Expanding 21 physician multispecialty group has two openings: Pediatrician and Active Family Prac-

titioner. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Pediatric Hematologist/Oncologist—Immediate opportunity. The Austin Children's Cancer Center is seeking a pediatric hematologist/oncologist. Please phone James C. Sharp, MD, Medical Director, 512 479-8538.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Board certified or eligible, immediate opening for full term or locum tenens private practice position in Dallas-Fort Worth metroplex to aggressive professional. There are in-patient and out-patient services. Must be knowledgeable in ultrasound, special procedures and CT. Please reply to Ad-637, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Acute care 166-bed hospital seeks MD board eligible/board certified invasive radiologist. Facility is equipped with modern CT, ultrasound, and nuclear medicine equipment. Located in suburb of Dallas County. Please send your confidential resume to Ad-652, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Other Opportunities

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129. Toll free in Texas 1-800-331-8472.

The Medical and Surgical Clinic of Sherman, Texas is currently expanding its multispecialty group to include specialists in pediatrics, ophthalmology and otolaryngology. Interested parties please contact Ron Marshall, Administrator, 214 893-5138 (collect).

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

Arizona based physician recruitment firm has opportunities coast to coast. "Professionals working with professionals." Over 14 years experience. Call 602 990-8080, or send CV to: Mitchell & Associates, Inc., P.O. Box 1804, Scottsdale, Arizona 85252.

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or BE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78539; 512 383-1481.

Physician Opportunities, Sunbelt—We have unadvertised solo, group and hospital based opportunities for general practice and most specialties. Financial guarantees, benefit packages negotiable. Fee paid. Professionals serving professionals. Send CV or call Frank Hess at 512 327-6944. Sanford Rose Associates, 1705 Capital of Texas Hwy., South, Suite 202, Austin, Texas 78746.

Looking for a nice practice situation in Austin, Texas? FamilyCare Group is recruiting a gynecologist, pediatrician, or internist to affiliate with our staff. Call 512 467-1707 for further information about this opportunity.

Immediate Texas opening for specialists in FP, OBG, GS and PD. Contact Armando Freeza, 512 331-4164 or send CV to Medical Support Services, 11509 Quarter Horse Trail, Austin, Texas 78750.

Expanding Texas Multispecialty Group—Dallas/Fort Worth, requires BE/BC physicians: Internal medicine, OBG, family practice, orthopedic surgery, anesthesiology, general surgery, pediatrics, ENT, urology, cardiology, dermatology, radiology, psychiatry. Competitive salary. Extensive benefits. Direct inquiry, CV to: Medical Director, Permanente Medical Association of Texas, 12720 Hillcrest, Suite 600, Dallas, Texas 75230.

Austin—Desire two physicians to divide 84 hour week at a primary care clinic on a permanent basis beginning June 1987. Excellent staff, providing quality, sensitive patient care. No call or inpatient responsibilities. Please contact Elizabeth Adams, 6140 West Highway 290, Austin, Texas 78735; 512 892-4820.

Texas Opportunities—$85-$150,000 guarantees. Cities, suburbs, large-small towns: neurosurgeon, neurologist, oncologist, ear-nose-throat, rheumatologist, obstetrician-gynecologist, internist, family practitioner. Call or send CV to Nancy McEntire or Ray Carter, 512 338-0041. Kemper Resources, 9442 Capital of Texas Hwy., North, Suite 350, Austin, Texas 78759.

Otorhinolaryncologist needed to join 18 physician multispecialty group. High first year guarantee in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720.

Infectious Disease Subspecialist—Must be BE/BC to join same in 100 percent consultative practice in town of 120,000 plus. Send CV to P.O. Box 2368, Beaumont, Texas 77704.

Orthopedic Surgeon—Practice opportunity for orthopedic surgeon at Hopkins County Memorial Hospital, Sulphur Springs, Texas. Sulphur Springs is a community of 15,000 offering the best of small town living, but near a major metropolitan area. The orthopedic business is waiting for the right person. Contact Don Magee, Administrator, at 214 885-7671 for further details.

OPPORTUNITIES SOUGHT

We have physicians who are looking to join solo, partnerships, or multispecialty groups in the Texas area. For more information call Medical Advisory Group, Inc., 214 758-9939.

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. 512 477-6704, ext. 263.

General surgeon seeks suitable position. Willing to do some general practice. Will also consider HMO, minor surgery centers. Has current Texas license. Apply to Ad-649, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

prn, ltd.
physican staffing

We put together
"temporary solutions"
and "lasting relationships"
locum tenens & permanent placements

1-800-531-1122
1000 N Walnut (Suite A)
New Braunfels, Texas 78130

Family Practice Locum Tenens—Experienced, ABFP, professional liability insurance. Competitive rates. Nu Way Medical Service. 214 677-5302; #2 Crystal Drive, Athens, Texas 75751.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical laboratory, office, x-ray, ultra-sound equipment in excellent condition. We buy, sell, broker and repair. Ask about our Holter Scanning Services. Appraisals by Certified Surgical Consultants, Medical Equipment Resale, Inc., 24026 Haggerty Road, Farmington, Michigan 48018; 313 569-4407 anytime.

Complete set-ups to single items. Save over 50% on some items. Some examples: Ritter power tables, Medco Sololator, Burdick EK-8, Nova I, x-ray equipment, new Procto equipment. Ames Seralyzers, $500 up. All guaranteed! We buy, sell and broker. Call or write Medexchange, P.O. Box 18164, Dallas, Texas 75218, 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $1275. Cardionostic Holter recorder (cassette) available from $995. Smallest slightest Holters update. Fast service (24-48 hrs.) turn over. Hookup kits starting at $4.95. Special introductory offer of three free tests with any purchase or lease of the recorder. Cardiologist overread available for $15. If interested call 301 870-3626.

Office Space/Property

Austin: For lease, 1300 sq. ft. duplex near Seton. Ideal for solo. Waiting, two offices, lab, nurse's station and four exam rooms. Ben H. White, MD or Karen Haslund, MD, 512 454-8691.

North Dallas suburb—up to 3400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 867-6500.

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

Austin: To sublet, 2,129 sq. ft. adjacent to Seton Hospital and other primary medical facilities. Ideal for two man office. Waiting, business and reception area, two offices, three exam rooms, x-ray room/lab. Corner suite on 7th floor, with lovely view. Ten-station, 4 lines phone system available also. For more information call Debbie: 512 458-3257.

Denton, Texas—Brand new unique medical building offers 3,300 sq. ft. for lease or sale. Centrally located in a rapidly growing area 25 minutes away from Dallas/Fort Worth. Prefer obstetricians or ENTs. Will help with finishing out, plus three months free rent. Will share x-ray facility. Call 817 382-5466.

Austin—General internist desires to sublet half of 2,200 square foot office in Medical Arts Square. Convenient location one block from St. David's Hospital near university campus. Two exam rooms, one consultation room, chest x-ray facilities, large waiting area, free parking. Terms negotiable. 512 476-9145.

Plush Medical Office for Lease—Location: Trail Creek Medical Center, Euless, Texas. Totally furnished: exam tables, file cabinets, desks, etc. 1,000 square feet. Must see to believe! Rent: Negotiable with possibilities of buying furnishings in two years. If interested, please contact: Dr. Thomas Arnold, 214 252-5525.

Central Austin—1,250 square feet available. Perfect for start-up or solo practice. No competition in immediate area. Extremely generous lease, advertising allowances. For information call 512 452-7640.

For sale or lease, Austin, Texas—Medical office space; 1,660 square feet located at 711 West 38th Street at the Medical Science Center. If interested call 512 338-0144.

San Antonio—2,250 square feet finished garden office space available to share. Offered by general internist. Located near Blanco and West Avenue in rapidly growing North Central area. 512 377-3224.

Office space for lease or sublease in Spring Branch-Houston. Prime location at major intersection. 600 square feet adjacent to established dental office. Attractive lease terms. Contact Russel at 713 498-3663.

Practices

Gynecology: Houston. Extremely large, gynecology-only practice for sale in Northwest Houston. Practice enjoys an exceptional net income. Doctor retiring. Option to purchase building. 4½ days per week practice. For further details phone 713 771-5011, TMH428.

Family Practice—General Surgery—Central Texas. Dynamic practice with 100+ patients per week and five to 10 new patients per day. Good location with low overhead. Two hospitals, major university, cultural and recreational opportunities. Call evenings: 409 693-4529.

Medical practice sales and appraisals—We specialize in the valuation and selling of medical practices. If interested in buying or selling a medical practice contact our Brokerage Division at The Health Care Group, 400 G5B Building, Bala Cynwyd, PA 19004; 215 667-8630.

Thriving family practice for sale in South Texas. Established 10 years. Gross $250,000 plus. Excellent community opportunity and terms close to big metropolis with year around recreational facilities. Owner planning to leave for Fellowship training. Please reply to Ad-648, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

General surgery practice, office and equipment for sale or lease with option to buy. 30 miles from San Antonio, drawing population 50-60,000. Receipts over $200,000 year. Leaving for Fellowship. Available now to July. Call 512 379-0326.

Retiring family physician wishes to sell well established practice. Most suitable for Spanish-speaking doctor. Contact Reuben Mutnick, MD, 112 S. Concepcion Avenue, El Paso, Texas 79905; 915 772-5866 am, 915 581-0875 pm.

Ten years, well established general practice in Beeville, Texas for sale due to physician going back to his own country. Practice and equipment for only $10,000. Town population 25,000 with serving area 50,000; 56 miles from Corpus Christi and 80 miles from San Antonio. For information call Dr. Ng at 512 358-8900, 9:30 am-noon and 2-5 pm.

Thriving young family practice for sale. Town of 5,000 near Houston. Includes fully furnished office in leased space, lab equipment and x-ray. 25-bed hospital in town, larger facilities nearby. Great opportunity. Send CV to Ad-653, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Dallas, Gynecology—Rewarding gynecological practice, Baylor Hospital area, offered by retiring physician. Board eligible or certified candidates only. Unusual benefits; attractive option to own office space in Joint Venture Medical Building. Please reply to Ad-651, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

"COMPLETE" MEDICAL SYSTEM

COMPUTER

processor: 512K • 42 MB Disk • Tape • Printer • Modem • MS-Dos

SOFTWARE

medical: Patient Control • Acc-Rec Transactions • Insurance Billing • Management Reports

"TOTAL $9,995"

ASI (512) 258-4286
11911 Millwright Parkway
Austin, Texas 78750

CONTINUING EDUCATION

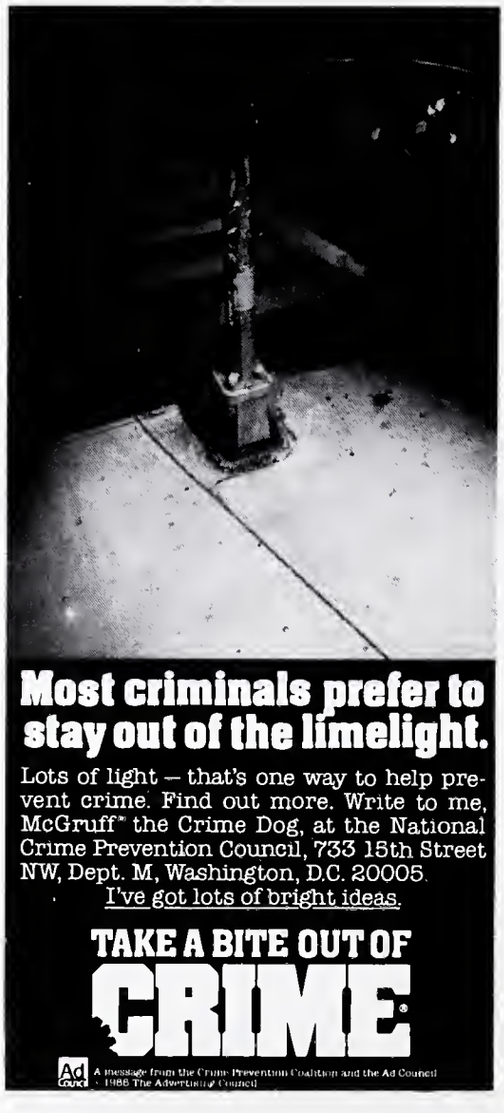
The Fourth Annual South Texas Perinatal-Neonatal Conference will be held April 16-18, 1987, from 8 am to 1 pm at the Embassy Suites Hotel, 1800 South 2nd Street, McAllen, Texas. For further information, please contact Joyce Patrick at 512 686-3401.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

Wanted to buy—General practice or general practice with surgery or minor emergency center. Could take over the practice immediately. Have current Texas license. Apply to Ad-650, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Advertising Rates & Data: Regular classified advertising sells for $39. (US currency) per issue for 50 words or less, payable in advance. Display classified advertising sells for $70. per column inch, per month. A variety of typefaces, logos and borders may be used in display classified ads. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings cannot be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Federal laws prohibit references to race, color, religion, sex, national origin, or age unless bona fide occupational qualifications. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.


Most criminals prefer to stay out of the limelight.
Lots of light – that's one way to help prevent crime. Find out more. Write to me, McGruff™ the Crime Dog, at the National Crime Prevention Council, 733 15th Street NW, Dept. M, Washington, D.C. 20005.
I've got lots of bright ideas.
TAKE A BITE OUT OF CRIME
Ad Council
A message from the Crime Prevention Coalition and the Ad Council
© 1986 The Advertising Council

CANCER. IT'S SIMPLY NOT WHAT IT USED TO BE.

Over the last 40 years, research programs supported by the American Cancer Society have made increasing progress in the treatment, detection and prevention of cancer.

In 1986 alone, the Society funded over 700 projects conducted by the most distinguished scientists and research institutions in the country.

Which is why, this year, hundreds of thousands of people will be successfully treated for the disease.

We are winning.

But we need you to help keep it that way.

AMERICAN CANCER SOCIETY®

Help us keep winning.

Created as a public service by
Ally Gargano/MCA Advertising LTD.

Advertising Directory

Air Force	90
Air Force Reserve	2nd Cover
American Physicians Insurance Exchange	11
American Physicians Life Insurance	63
Asset Protection Guide	119
Ayerst Laboratories	38, 40, 79–82
BMW Center	9
Campbell Laboratories, Inc.	90
Crosslands Medical Center	84–85
Diagnostic Clinic of Houston	22
Glaxo/Roche	57–60
I.C. System, Inc.	107
Knoll Pharmaceutical	17, 18, 61–63
Eli Lilly & Company	99
Marion Laboratories	19, 20
McNeil Pharmaceutical	4
The Medical Protective Company	3rd Cover
Roche Laboratories	1, 2, 33, 34, 44
Roerig	100–102
Scott and White Clinic	Back Cover
Spring Shadows Glen	2nd Cover
Starlite Village Hospital	119
Texas Medical Association	
120th Annual Session	27–32
1987 Calendar of Workshops	23, 24
Committee on Physician Health and Rehabilitation	10
Forecast '87, Reading Medicine's Future/Cassette Tapes	26
HealthWise Series	51
Memorial Library	106
Texas Medical Association Insurance Program	14
Texas Medical Liability Trust	35
Timberlawn Psychiatric Hospital	Back Cover
Trans-Texas Leasing	95
The University of Texas Health Center at Tyler	2nd Cover
The Upjohn Company	37
Vestra-Subco, Inc.	12
Warm Springs Rehabilitation Hospital	25
Western Medical Corp.	87
Texas Physician's Directory	109–115
Classified Advertising	116–118

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

$19.95 TEXAS GUIDE TO LEGALLY PROTECTING A$$ETS FROM CREDITORS

(Including Lawsuit Judgment Debts)

Know the Latest Texas and Federal Law—Written in an Easy to Read Style by Lawyers for the Non-Lawyer

Over 100 Pages of Critical Information and Planning Ideas Concerning Bankruptcy Laws, Debtor Defenses, Exempt Property, Laws regarding Hiding or Transferring Property, Marital Property Laws, Laws about Offshore Property and Much More

Send $19.95 plus $3.00 postage and handling to—

A$$ET PROTECTION GUIDE,
P.O. Box 1481—Dept 23
Bellaire, Texas 77401

Starlite Village Hospital

Center Point, Texas

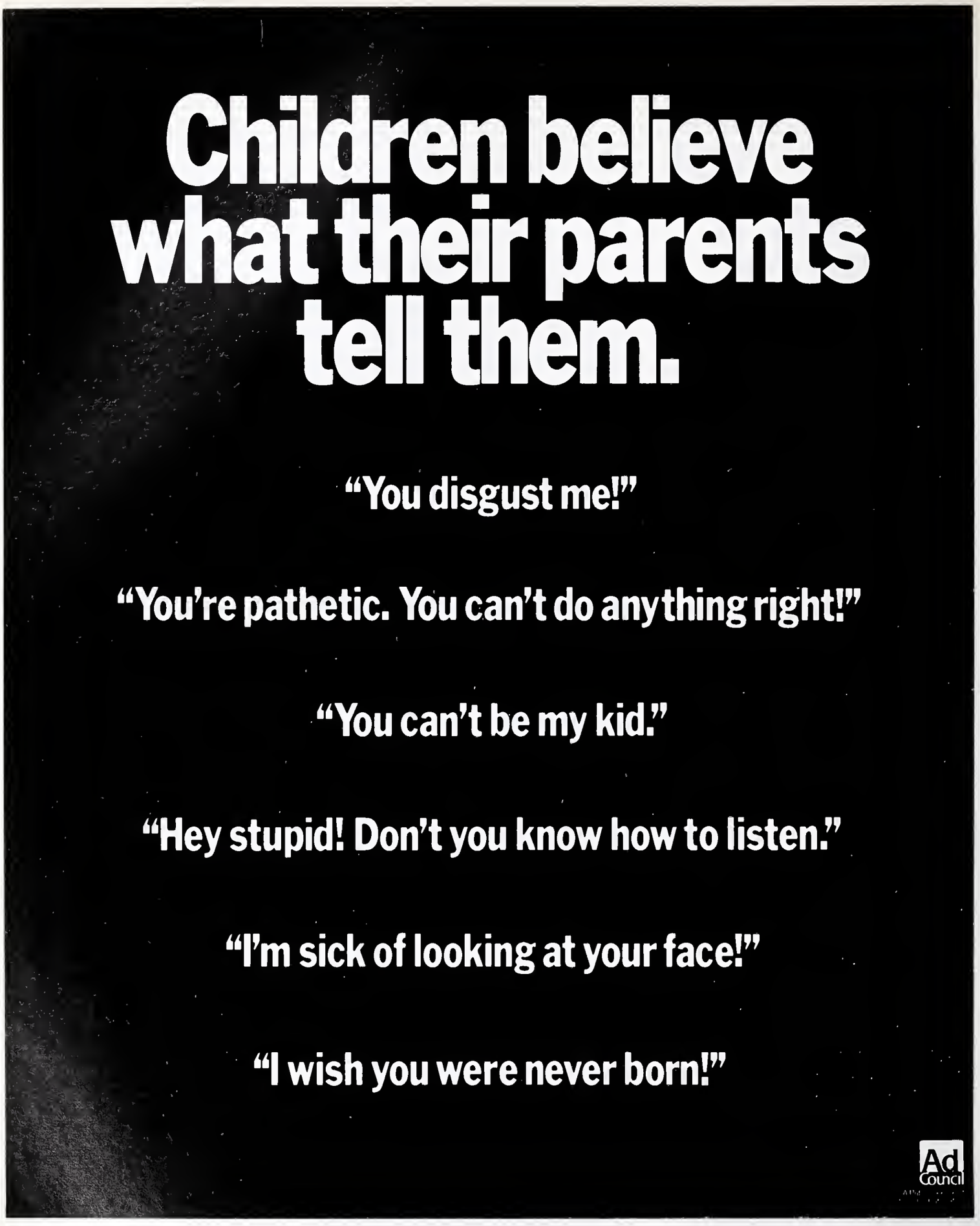
Ph. 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Annabelle Lindner
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED


Children believe what their parents tell them.
"You disgust me!"
"You're pathetic. You can't do anything right!"
"You can't be my kid."
"Hey stupid! Don't you know how to listen."
"I'm sick of looking at your face!"
"I wish you were never born!"
Ad Council

Words hit as hard as a fist. Next time, stop and listen to what you're saying. You might not believe your ears.

Take time out. Don't take it out on your kid.

Write: National Committee for Prevention of Child Abuse, Box 2866E, Chicago, Illinois 60690

COURSES

MAY

TMA ANNUAL SESSION SCIENTIFIC PROGRAMMING

The following continuing medical education courses will be offered during TMA's 120th Annual Session, May 13-17, 1987, in Houston. Most courses are scheduled in the Albert Thomas Convention Center; others will be held in adjacent hotels. For further information, contact Dale Willimack, CAE, Director, Department of Annual Session and Scientific Programming, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

As an organization accredited to sponsor continuing medical education by the Accreditation Council for Continuing Medical Education, the Texas Medical Association designates these continuing medical activities as meeting the criteria for hour-for-hour credit in Category 1 of the Physician's Recognition Award (PRA) of the American Medical Association.

Adolescent Medicine

May 15, 1987
SYMPOSIUM ON ADOLESCENT SUICIDE. Room 107-A, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 6 hours

Aerospace Medicine

May 14, 1987
FLYING PHYSICIANS ASSOCIATION, SOUTHWEST REGION SCIENTIFIC PROGRAM. Room 101, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Alcoholism

May 14, 1987
SYMPOSIUM REGARDING CODEPENDENCY AND THE FAMILY. Room 102, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Allergy and Immunology

May 16, 1987
SECTION ON ALLERGY. Room 102, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Anesthesiology

May 16-17, 1987
TEXAS SOCIETY OF ANESTHESIOLOGISTS SCIENTIFIC PROGRAM. Saturday, Room 106, Albert Thomas Conference Center; Sunday, Ile de France Ballroom, Section A, Doubletree Hotel. Fee none. Category 1, AMA PRA; 10 hours

Cardiovascular Disease

May 14, 1987
SYMPOSIUM ON CARDIOVASCULAR DISEASES. Room 204, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 7 hours

Chest Disease

May 14, 1987
SECTION ON DISEASES OF THE CHEST. Room 2-D, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Colon and Rectal Surgery

May 16, 1987
SECTION ON COLON AND RECTAL SURGERY. Room 2-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 4 hours

Critical Care Medicine

May 13-14, 1987
ADVANCED TRAUMA LIFE SUPPORT COURSE. Baylor College of Medicine. Fee $400 physicians, $150 nurses. Limited enrollment, preregistration required. 16 hours ACS. Contact David V. Feliciano, MD, or Darlene Adams, RN, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 791-7170

May 14, 1987
BASIC LIFE SUPPORT FOR PHYSICIANS—COURSE. Ile de France Ballroom, Section B, Doubletree Hotel. Fee $40. Category 1, AMA PRA; 4 hours

May 14-16, 1987
ADVANCED CARDIAC LIFE SUPPORT—PROVIDER COURSE. Ile de France Ballroom, Section B, Doubletree Hotel. Fee $160. Category 1, AMA PRA; 16 hours

Dermatology

May 15-17, 1987
TEXAS DERMATOLOGICAL SOCIETY SCIENTIFIC PROGRAM. Room 2-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 11 hours

Endocrinology and Metabolism

May 15, 1987
SECTION ON ENDOCRINOLOGY. Room 2-D, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

May 16, 1987
SYMPOSIUM ON PITUITARY DISORDERS. Room 2-C, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 4 hours

Family Medicine

May 14, 1987
TEXAS ACADEMY OF FAMILY PHYSICIANS SEMINAR. Room 114, Albert Thomas Conference Center. Fee $60 members, $70 nonmembers, $20 residents of TAFP/AAFP, $30 nonmember residents, $30 RNs, PAs. Category 1, AMA PRA; 6 hours

May 15, 1987
SECTION ON FAMILY PRACTICE. Room 106, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 6 hours

Gastroenterology

May 16, 1987
SECTION ON DIGESTIVE DISEASES. Room 2-D, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 4 hours

Geratrics

May 16, 1987
SYMPOSIUM ON GERIATRICS/TEXAS MEDICAL DIRECTORS ASSOCIATION AND COMMITTEE ON AGING AND NURSING HOMES. Room 2-G, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Hematology

May 15, 1987
SYMPOSIUM ON HOSPITAL TRANSFUSION COMMITTEE. Room 105, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Internal Medicine

May 15, 1987
SECTION ON INTERNAL MEDICINE. Room 102, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Legal Medicine

May 14, 1987
SYMPOSIUM ON MEDICINE AND THE LAW. Room 110, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Medical Administration

May 15, 1987
SYMPOSIUM ON HEALTH PROBLEMS AMONG MEDICAL STUDENTS AND RESIDENT PHYSICIANS. Ile de France Ballroom, Section A, Doubletree Hotel. Fee none. Category 1, AMA PRA; 3 hours

Nephrology

May 15, 1987
RENAL PHYSICIANS OF TEXAS. Room 112, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Neurology

May 15-16, 1987
SECTION ON NEUROLOGY. Room 203, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 8 hours

Neurosurgery

May 15-16, 1987
SECTION ON NEUROLOGICAL SURGERY. Friday: Anjou Ballroom, Sections A and B, Doubletree Hotel; Saturday: Ile de France, Section A, Doubletree Hotel. Fee none. Category 1, AMA PRA; 7 hours

Nuclear Medicine

May 14, 1987
SYMPOSIUM ON MEDICAL ASPECTS OF NUCLEAR WAR. Room 109, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

May 16, 1987
SECTION ON NUCLEAR MEDICINE. Room 109, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Obstetrics and Gynecology

May 14, 1987
SECTION ON OBSTETRICS AND GYNECOLOGY. Room 106, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

May 15, 1987
SYMPOSIUM ON MATERNAL AND CHILD HEALTH. Room 202, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Occupational Medicine

May 16-17, 1987
SECTION ON OCCUPATIONAL MEDICINE. Room 104, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Oncology

May 15-16, 1987
SECTION ON ONCOLOGY. Friday, Room 2-C and Saturday, Room 112, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Ophthalmology

May 15-16, 1987
SECTION ON OPHTHALMOLOGY. Room 204, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 10 hours

Orthopedic Surgery

May 16-17, 1987
TEXAS ORTHOPAEDIC ASSOCIATION SCIENTIFIC PROGRAM. Room 107-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 10 hours

Otolaryngology

May 15-16, 1987
SECTION ON OTOLARYNGOLOGY. Room 101, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 8 hours

Pathology

May 16, 1987
SECTION ON PATHOLOGY. Room 202, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Pediatrics

May 15, 1987
SECTION ON PEDIATRICS. Room 114, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 7 hours

Physical Medicine and Rehabilitation

May 16, 1987
SECTION ON PHYSICAL MEDICINE AND REHABILITATION. Room 111, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 7 hours

Plastic Surgery

May 15-16, 1987
SECTION ON PLASTIC, RECONSTRUCTIVE AND MAXILLOFACIAL SURGERY. Room 110, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 10 hours

Preventive Medicine and Public Health

May 15, 1987
SECTION ON PUBLIC HEALTH. Room 109, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Psychiatry

May 15, 1987
SECTION ON PSYCHIATRY. Room 107-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Radiology

May 15, 1987
SECTION ON RADIOLOGY. Room 108, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Sports Medicine

May 15, 1987
SYMPOSIUM ON SPORTS MEDICINE. Room 114, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 6 hours

Surgery

May 14, 1987
INTERNATIONAL COLLEGE OF SURGEONS, TEXAS DIVISION. Room 108, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

May 15, 1987
SECTION ON SURGERY. Room 2-C, Albert Thomas Conference Center, from 2 pm to 5 pm joint session of the Sections on Surgery and Oncology. Fee none. Category 1, AMA PRA; 4 hours

Urology

May 15, 1987
SECTION ON UROLOGY. Room 104, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

COURSES

APRIL

Arthritis and Rheumatism

April 24, 1987
THE ST PAUL TEACHING DAY IN RHEUMATIC DISEASES. Wyndham Hotel, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Family Medicine

April 6-11, 1987
FAMILY PRACTICE REVIEW 1987. San Luis Hotel, Galveston, Tex. Fee $500. Category 1, AMA Physician's Recognition Award; 45 hours. Contact Gayle Norris, Learning Center J-34, Office of Continuing Education, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

April 22-26, 1987
3RD ANNUAL FAMILY MEDICINE REVIEW WITH TESTING TECHNIQUES FOR BOARD EXAMS. Four Seasons Hotel, Austin, Tex. Fee $350 physicians, $225 residents. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Office of Continuing Medical Education, Scott and White, Temple, TX 76508 (817) 774-4073

April 27-May 1, 1987
11TH ANNUAL REVIEW COURSE IN FAMILY PRACTICE. Marriott Hotel at Astrodome, Houston. Fee $490 physicians, $325 PAs. Category 1, AMA Physician's Recognition Award; 50 hours; AAFP prescribed. Contact Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

April 11, 1987
DIABETES UPDATE. Wyndham Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

April 11, 1987
2ND ANNUAL WOMEN IN MEDICINE SYMPOSIUM. The University of Texas Southwestern Medical School, Dallas. Fee TBA. Credit TBA. Contact Jackie de Salme, B11.100, Office of Associate Dean of Student Affairs, UT Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235-9006

April 21-22, 1987
AIDS AND PUBLIC POLICY: A COMMUNITY RESPONSE. Downtown Chicago Marriott, Chicago. Fee TBA. Credit TBA. Contact Robert Rinaldi, PhD, AMA Project Coordinator on AIDS, 535 N Dearborn St, Chicago, IL 60610 (312) 645-5076

April 23-25, 1987
OCCUPATIONAL LUNG DISEASE. Houston Marriott Medical Center, Houston. Fee $285. Category 1, AMA Physician's Recognition Award; 17 hours. Contact Vicki Forgac or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Oncology

April 2-3, 1987
THE CHILD WITH CANCER IN THE COMMUNITY. M.D. Anderson Hospital and Tumor Institute, Houston. Fee $35 advance registration, $50 on-site registration. Credit TBA. Contact Shirley Roy, Conference Services, HMB 131, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

April 22-25, 1987
1ST BIENNIAL SYMPOSIUM ON MINORITIES AND CANCER. Westin Galleria Hotel, Houston. Fee $175, $125 allied health professionals and lay persons. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Shirley Roy, Conference Services, HMB 131, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

April 29-May 2, 1987
CANCER UPDATE: NEW PERSPECTIVES IN CANCER BIOLOGY, CONTROVERSIES IN MANAGEMENT, BOARD REVIEW. The University of Texas M.D. Anderson Hospital and Tumor Institute, Houston. Fee $250 physicians, $100 residents and fellows, UTSC staff and trainees reduced rate. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Shirley Roy, Conference Services, HMB 131, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

Otolaryngology

April 4-5, 1987
ENDOSCOPIC SINUS SURGERY. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $500 lecture series and lab course, $250 lecture series and videos only. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Ann Parchem, Division of Continuing Education, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Pediatrics

April 3-4, 1987
PEDIATRIC POSTGRADUATE SYMPOSIUM: PEDIATRICS 1987. Marriott Hotel Medical Center, Houston. Fee $190 physicians and clinical faculty; $125 one day fee; $95 non-Baylor fellows, residents, PAs, and nurses. Category 1, AMA Physician's Recognition Award; 13 hours. AAFP prescribed. Contact Carol Soroka or Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

April 10-12, 1987
24TH ANNUAL PEDIATRICS FOR THE PRACTITIONER. Hyatt Regency, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

April 22-25, 1987
SYMPOSIUM ON OPTIONS IN MANAGING CHILDREN WITH INFECTIONS/7TH ANNUAL NATIONAL PEDIATRIC INFECTIOUS DISEASE SEMINAR. Hilton Hotel, Las Vegas. Fee $300 physicians, $225 residents, fellows, PAs, and pediatric nurse practitioners. Category 1, AMA Physician's Recognition Award; 22 hours. AAFP prescribed. Contact Marian Troup, Department of Pediatrics, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3439

Sports Medicine

April 9-11, 1987
2ND ANNUAL SYMPOSIUM ON REHABILITATIVE SPORTS MEDICINE. Inn on the Park, Houston. Fee $275 physicians, $200 therapists and allied professionals, $150 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

April 6-8, 1987
GARY P. WRATTEN SURGICAL SYMPOSIUM. Location TBA, El Paso, Tex. Fee $150. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Col Silverio Cabellon, Jr, Chief, General Surgery Service, William Beaumont Army Medical Center, El Paso, TX 79920-5001 (915) 569-2698 or (915) 569-2621

MAY

Family Medicine

May 30, 1987
FAMILY PRACTICE: CLINICAL ENCOUNTERS 1987. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $85. Category 1, AMA Physician's Recognition Award; 8 hours. AAFP prescribed. Contact Linda Spino, PhD, Department of Family Practice and Community Medicine, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2134

General Medicine

May 9, 1987
MANAGEMENT OF MYOCARDIAL INFARCTION IN THE COMMUNITY HOSPITAL. Registry Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

May 20, 1987
12TH ANNUAL INFECTIOUS DISEASES SEMINAR. Wyndham Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235

Internal Medicine

May 26-29, 1987
10TH ANNUAL INTENSIVE REVIEW OF INTERNAL MEDICINE. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $325. Category 1, AMA Physician's Recognition Award; 28 hours. Contact Ann Parchem, Division of Continuing Education, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Pathology

May 14-16, 1987
CURRENT ISSUES IN SURGICAL PATHOLOGY, VI. Room D1.600, The University of Texas Health Science Center, Dallas. Fee $600 complete course with glass slides, $450 complete course without glass slides, $350 basic course, $125 per day/partial course, $125 students. Category 1, AMA Physician's Recognition Award; 22 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Physical Medicine and Rehabilitation

May 7-9, 1987
5TH ANNUAL CHRONIC PAIN COURSE: EVALUATION AND MANAGEMENT. Baylor College of Medicine, Houston. Fee TBA. Credit TBA. Contact Vicki Forgac or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

JUNE

Orthopedic Surgery

June 5-7, 1987
SOUTHWESTERN ORTHOPEDIC SURGERY REVIEW. Dallas. Fee $425. Category 1, AMA Physician's Recognition Award; 25 hours. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Otolaryngology

June 18-20, 1987
18TH ANNUAL OTOLARYNGOOGY CONFERENCE. San Luis Hotel, Galveston, Tex. Fee $200. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Martha Berlin, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Pediatrics

June 8-12, 1987
ACUTE CARE PEDIATRICS: REVIEW AND UPDATE OF THE STATE OF THE ART. Mariner's Inn, Hilton Head Island, SC. Fee $325 physicians, $225 non-Baylor residents. Category 1, AMA Physician's Recognition Award; 24 hours. AAFP prescribed. Contact Lila Lerner or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-4941

June 11-13, 1987
1987 ANNUAL PEDIATRIC REVIEW AND UPDATE. San Luis Hotel, Galveston, Tex. Fee $275 before May 18, $315 after May 18. Category 1, AMA Physician's Recognition Award; 15 hours. Contact Gayle Norris, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis

Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Saturdays, 9 am-12 pm (Oct 25, 1986-May 2, 1987)
FUNDAMENTALS OF PRACTICAL THERAPEUTICS. Cullen Auditorium, Baylor College of Medicine, Houston. Fee $295 physicians, $100 residents and fellows. Category 1, AMA Physician's Recognition Award; 72 hours. AAFP prescribed. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN CLINICAL NMR. Biomedical NMR Center, Baylor College of Medicine, Houston. Fee $1,000; $500 lecture series only. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Biomedical NMR Center, The Woodlands, Tex. Fee $800 physicians, $400 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

EF TELEPLAST TELECONFERENCES

April 25, 1987, Saturday, 10 am to 12 pm
OUTPATIENT CHIN ADVANCEMENT AND CRANIAL BONE GRAFT HARVESTING TECHNIQUES. Viewing areas. Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 non-members. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

MARCH

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
March 24, 1987, Holiday Inn Beaumont Plaza, Beaumont
March 25, 1987, The Lincoln Hotel Post Oak, Houston

HOW TO IMPROVE THIRD-PARTY REIMBURSEMENT—2 hours
March 24, 1987, Holiday Inn Beaumont Plaza, Beaumont
March 25, 1987, The Lincoln Hotel Post Oak, Houston

PERSONAL INCOME AND ESTATE TAX PLANNING
March 21-22, 1987, Hyatt Regency, San Antonio

APRIL

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
April 1, 1987, Ramada Hotel, Tyler
April 7, 1987, Embassy Suites Hotel, Airport, Austin
April 8, 1987, The Worthington Hotel, Fort Worth
April 10, 1987, Embassy Suites Hotel, Abilene

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
April 1, 1987, Ramada Hotel, Tyler
April 7, 1987, Embassy Suites Hotel, Airport, Austin
April 8, 1987, The Worthington Hotel, Fort Worth
April 10, 1987, Embassy Suites Hotel, Abilene

GEARING UP FOR RETIREMENT—4 hours
April 4-6, 1987, La Mansion del Rio, San Antonio

CALENDAR OF MEETINGS ■Denotes Texas Meetings

MARCH

8TH NATIONAL LESBIAN AND GAY HEALTH CONFERENCE/5TH NATIONAL AIDS FORUM, Los Angeles, March 26-29, 1987. National Lesbian and Gay Health Foundation, Inc, PO Box 65472, Washington, DC 20035 (202) 797-3708

AMERICAN ASSOCIATION OF IMMUNOLOGISTS ANNUAL MEETING, Washington, DC, March 29-April 3, 1987. Dr Joseph Saunders, 9650 Rockville Pike, Bethesda, MD 20814 (301) 530-7178

AMERICAN ASSOCIATION OF PATHOLOGISTS, INC, ANNUAL MEETING, Washington, DC, March 29-April 3, 1987. Dana Raitt, 9650 Rockville Pike, Bethesda, MD 20814 (301) 530-7130

AMERICAN COLLEGE OF MEDICINE 6TH ANNUAL MEETING, Las Vegas, March 15-20, 1987. John Bellows, MD, PhD, 211 East Chicago Ave, Suite 1044, Chicago, IL 60611 (312) 787-3335

AMERICAN HEART ASSOCIATION 27TH ANNUAL CONFERENCE ON CARDIOVASCULAR DISEASE EPIDEMIOLOGY, Charleston, SC, March 19-21, 1987. Leonard Cook, AHA, 7320 Greenville Ave, Dallas, TX 75231 (214) 750-5437

AMERICAN MEDICAL STUDENT ASSOCIATION ANNUAL MEETING, New Orleans, March 18-22, 1987. Jeffrey Stolz, 1910 Association Dr, Reston, VA 22091 (703) 620-6600

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS ANNUAL MEETING, Orlando, Fla, March 25-28, 1987. Elaine Galasso, 1718 Gallagher Rd, Norristown, PA 19401 (215) 825-3838

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY 22ND ANNUAL MEETING, Las Vegas, March 15-20, 1987. John G. Bellows, MD, PhD, 211 East Chicago Ave, Suite 1044, Chicago, IL 60611 (312) 787-3335

LEUKEMIA SOCIETY OF AMERICA 3RD NATIONAL MEDICAL SYMPOSIUM, San Diego, Calif, March 18-21, 1987. M. Louise Toglia, Medical Programs Department, 733 Third Ave, New York, NY 10017 (212) 573-8484

SOCIETY OF NUCLEAR MEDICINE, SOUTHWESTERN CHAPTER ANNUAL MEETING, Little Rock, Ark, March 26-29, 1987. Justine Jean Parker, PO Box 40279, San Francisco, CA 94140 (415) 647-1668

APRIL

■11TH ANNUAL COOLEY RADIOLOGICAL SOCIETY MEETING, Galveston, April 24-26, 1987. Martha Berlin, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

■12TH ANNUAL MENTAL HEALTH CONFERENCE, Houston, April 2-3, 1987. M.D. Anderson Hospital and Tumor Institute, Office of Conference Services, Box 131, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

AMERICAN ACADEMY OF NEUROLOGY ANNUAL MEETING, New York, April 5-11, 1987. Jan Kolehmainen, 2221 University Ave, SE, Minneapolis, MN 55414 (612) 623-8115

AMERICAN ASSOCIATION FOR THORACIC SURGERY ANNUAL MEETING, Chicago, April 6-8, 1987. William Maloney, Executive Director, AATS, 13 Elm St, Manchester, MA 01944 (617) 927-8330

AMERICAN BURN ASSOCIATION ANNUAL MEETING, Washington, DC, April 29-May 2, 1987. Thomas Wachtel, MD, 1130 E McDowell Rd, Suite B-2, Phoenix, AZ 85006 (602) 239-2391

AMERICAN COLLEGE OF OB/GYN ANNUAL CLINICAL MEETING, Las Vegas, April 27-30, 1987. W. H. McDannel, 600 Maryland Ave, SW, #300, Washington, DC, 20024 (207) 638-5577

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION ANNUAL MEETING, Philadelphia, April 26-May 1, 1987. Nancy Olson, 2340 S Arlington Heights Rd, #400, Arlington Heights, IL 60005 (312) 228-6850

AMERICAN PEDIATRIC SOCIETY ANNUAL MEETING, Anaheim, Calif, April 27-May 1, 1987. Audrey Brown, MD, 450 Clarkson Ave, Brooklyn, NY 11203 (718) 270-1692

AMERICAN ROENTGEN RAY SOCIETY ANNUAL MEETING, Miami, April 26-May 1, 1987. George Kling, MD, Harper-Grace Hospital, Dept of Radiology, 3990 John R, Detroit, MI 48201 (313) 494-8405

AMERICAN SOCIETY FOR HEAD AND NECK SURGERY ANNUAL MEETING, Denver, April 25-May 2, 1987. W. E. Fee, Jr, MD, ASHNS, Division of Otolaryngology, Head and Neck Surgery, Stanford University Medical Center, Stanford, CA 94305 (415) 497-5828

AMERICAN SOCIETY OF COLON AND RECTAL SURGEONS ANNUAL CONVENTION, Washington, DC, April 5-10, 1987. Harriette Gibson, Executive Director, 615 Griswold, #1717, Detroit, MI 48226 (313) 961-7880

INTERNATIONAL COLLEGE OF SURGEONS, UNITED STATES SECTION ANNUAL MEETING, Washington, DC, April 3-5, 1987. Rob Dewey, Coordinator, Membership and Continuing Medical Education, 1516 N Lake Shore Dr, Chicago, IL 60610-1694 (312) 787-6274

■MEDICAL-SURGICAL CONFERENCE OF THE RIO GRANDE VALLEY, McAllen, April 9-11, 1987. Conference Committee, Medical-Surgical Conference of the Rio Grande Valley, 817 Quince Ave, McAllen, TX 78501

NATIONAL CONFERENCE ON HIGH BLOOD PRESSURE CONTROL, INC, Las Vegas, April 24-26, 1987. Yvonne Rodler, 2121 Wisconsin Ave, NW, Suite 410, Washington, DC, 20007 (202) 944-3176

■SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS 29TH ANNUAL MEETING, Austin, April 4–8, 1987. Toby L. Simon, MD, PO Box 4679, Austin, TX 78765, (512) 459-6600.

SOUTHERN CALIFORNIA NEUROPSYCHIATRIC INSTITUTE 7TH INTERNATIONAL CONFERENCE/ADOLESCENTS IN CRISIS, Barbados, West Indies, April 15-20, 1987. Teresa Santana, SCNPI, 6794 La Jolla Blvd, La Jolla, CA 92037 1-800-423-9521

■TEXAS COUNCIL ON FAMILY RELATIONS ANNUAL MEETING, San Antonio, April 2-3, 1987. Dr Connie Steele, Dept of Human Development and Family Studies, College of Home Economics, Texas Tech University, Lubbock, TX 79409 (806) 742-3000

THE FEDERATION OF STATE MEDICAL BOARDS OF THE UNITED STATES ANNUAL MEETING. St Louis, April 23-25, 1987. The Federation of State Medical Boards of the United States, Inc, 2630 West Freeway, Suite 138, Ft Worth, TX 76102

MAY

AEROSPACE MEDICAL ASSOCIATION 58TH ANNUAL SCIENTIFIC MEETING, Las Vegas, May 10-14, 1987. R. R. Hessberg, MD, Executive Vice President, Washington National Airport, Washington, DC, 20001-4977 (703) 892-2240

AMERICAN ACADEMY OF PSYCHOANALYSIS 31ST ANNUAL MEETING, Chicago, May 7-10, 1987. AAP, 30 East 40th St, Suite 608, New York, NY 10016 (212)679-4105

AMERICAN ASSOCIATION OF PLASTIC SURGEONS ANNUAL MEETING, Nashville, Tenn, May 3-6, 1987. John Hoopes, MD, The Johns Hopkins Hospital, 600 North Wolfe St, Baltimore, MD 21205 (301) 955-6897

AMERICAN GASTROENTEROLOGICAL ASSOCIATION ANNUAL MEETING, Chicago, May 9-13, 1987. Sharon Szmaciasz, 6900 Grove Rd, Thorofare, NJ 08086 (609) 848-1000

AMERICAN PSYCHIATRIC ASSOCIATION ANNUAL MEETING, Chicago, May 9-15, 1987. Kathleen Bryan, Director, Meetings Management, 1400 K St, NW, Suite 503, Washington, DC 20005 (202) 682-6100

AMERICAN THORACIC SOCIETY ANNUAL MEETING, New Orleans, May 10-13, 1987. S.R. Iannotta, 1740 Broadway, New York, NY 10019 (212) 315-8778

■G.W.N. EGGERS SOCIETY/UTMB ORTHOPAEDIC ALUMNI 4TH ANNUAL MEETING, Galveston, May 19-21, 1987. Susan Royal, UTMB, Office of Continuing Education, Learning Center, J-34, Galveston, TX 77550-2782 (409) 761-2934

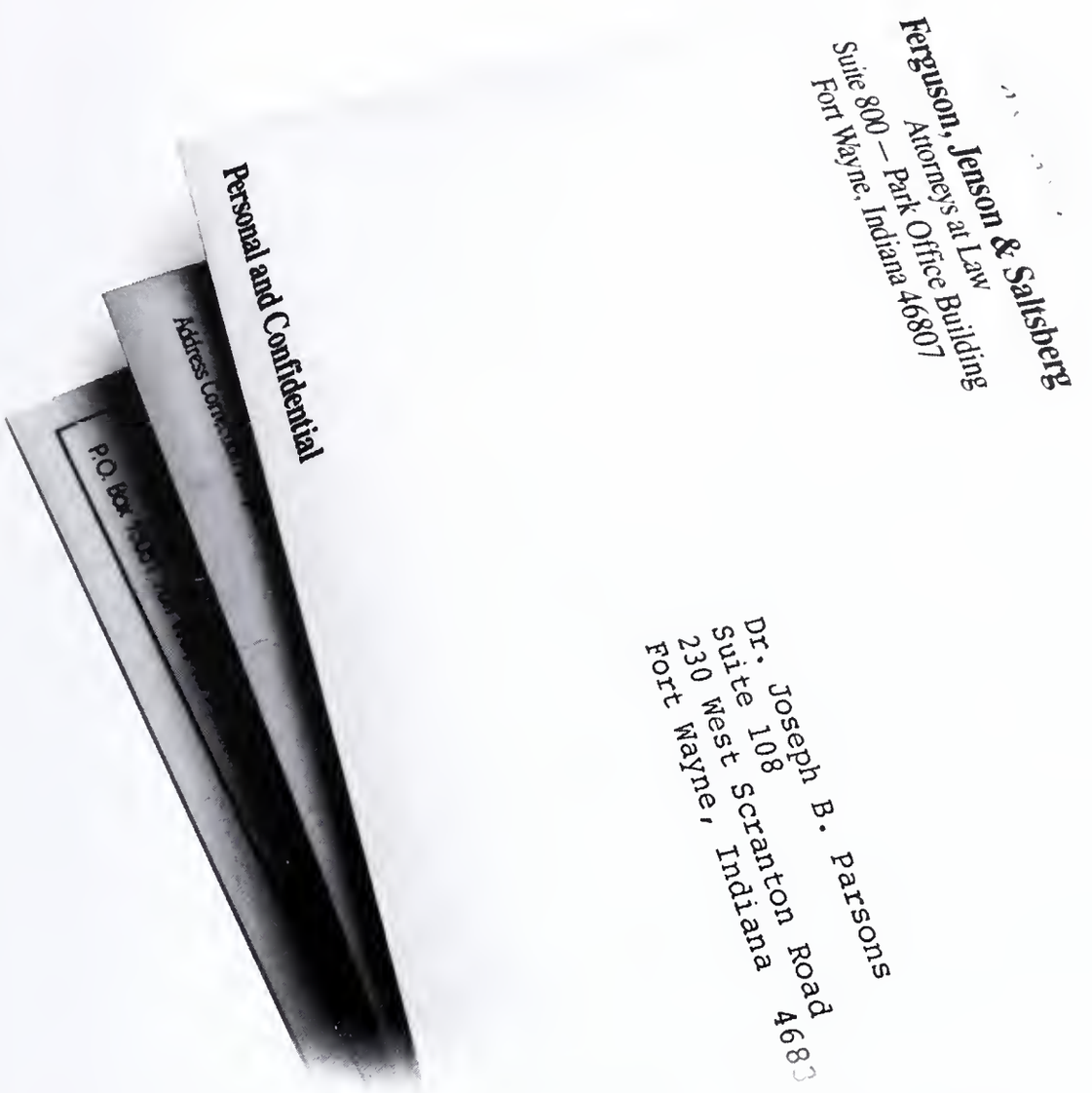
LOUISIANA-MISSISSIPPI OPHTHALMOLOGICAL AND OTOLARYNGOLOGICAL SOCIETY 49TH ANNUAL MEETING, Biloxi, Miss, May 28-30, 1987. Ben Davis, Jr, CAE, Executive Secretary, Louisiana-Mississippi O&O Society, PO Box 12314, Jackson, MS 39211 (601) 956-7787

MASTER APPPROACH TO CARDIOVASCULAR PROBLEMS 15TH ANNUAL CONFERENCE, Lake Buena Vista, Fla, May 30-June 1, 1987. Mrs Y. Barcena, Division of Cardiology, D-39, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 549-7124

NATIONAL RURAL HEALTH CARE ASSOCIATION NATIONAL CONFERENCE, Nashville, Tenn, May 6-9, 1987. NRHCA, 301 E Armour Blvd, Suite 420, Kansas City, MO 64111

■**TEXAS MEDICAL ASSOCIATION ANNUAL SESSION**, Houston, May 13-17, 1987. Robert G. Mickey, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

S&W SCOTT&WHITE

Texas A&M University
College of Medicine

Third Annual
FAMILY MEDICINE REVIEW

Selected Topics With Testing Techniques for Board Exams

Four Seasons Hotel
AUSTIN, TEXAS
April 22-26, 1987

For more information or to register contact: Office of Continuing Medical Education, Scott and White, Temple, Texas 76508, (817) 774-4073.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223 214/381-7181

APRIL 1987

Texas Medicine

7, 65, 83 It's yours! It's free! It's annual session, May 13–17, in Houston!

56 Colorectal health CHECK to find cancer early

41 How your practice can cope with change

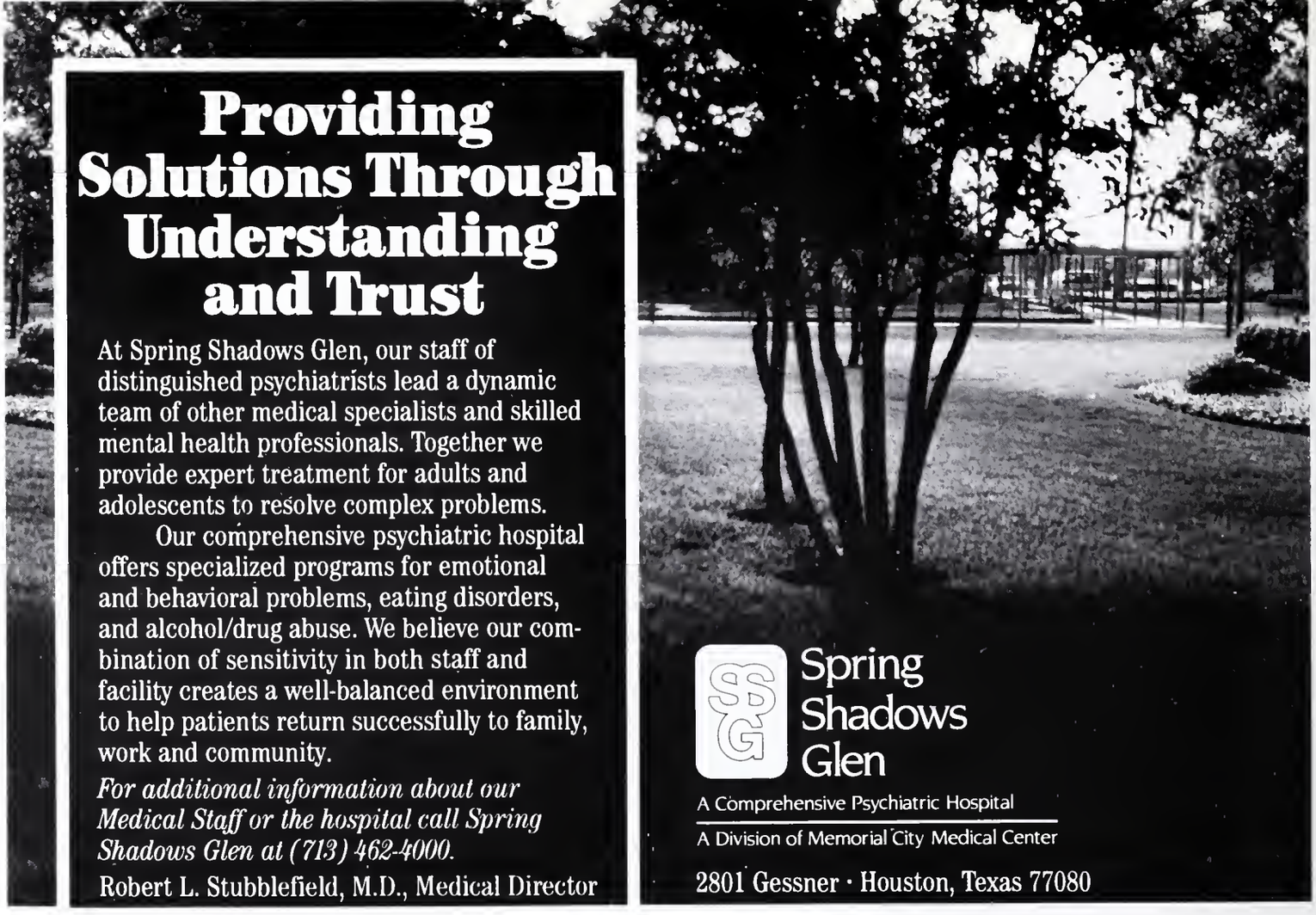
49 Streptokinase infusion in MI: What's the best route?

5, 30
Unhelmeted motorcyclists: Their sad and costly saga

LIBRARY
U.C. SAN FRANCISCO

THE LIBRARY
ACQUISITIONS DIV.-SERIALS
U.C. SAN FRANCISCO

****



Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080

Taking Giant Steps.

The smallest step can be a milestone . . . the simplest task, a major accomplishment. For individuals suffering from a physical disability, the day-to-day tasks we all take for granted can be major obstacles to independence and mobility.

At **Dallas Rehabilitation Institute (DRI)**, our team of physicians, therapists and nurses can plan an individualized treatment program to help your patient regain as much function and independence as possible. With the most modern facilities and equipment, and therapists who are rehabilitation specialists, we offer a unique approach to rehabilitation.

Our comprehensive rehabilitation programs include:

- **spinal cord injury**
- **head injury**
- **stroke**
- **arthritis**
- **amputee**
- **spinal pain**

Call us to arrange a private tour of our facilities or to receive more information on the disease category rehabilitation programs offered at DRI.

DRI

9713 Harry Hines Blvd.
Dallas, TX 75220-5441
(214) 358-6000
1-800-441-9199 (TX only)

YOUR ROCHE REPRESENTATIVE WOULD LIKE YOU TO HAVE SOMETHING THAT WILL...

ROCHE®

... improve patient satisfaction with office visits

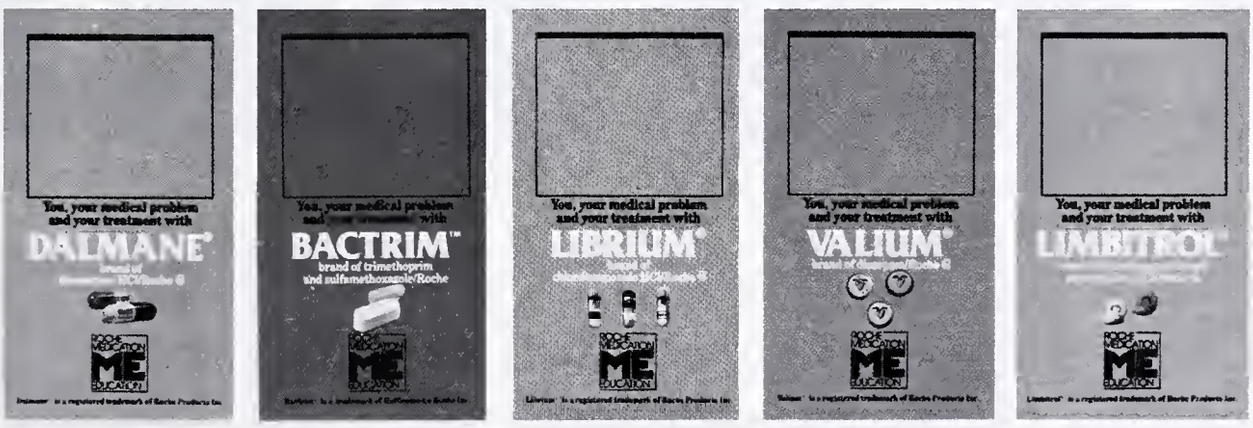
... improve patient compliance with your instructions

... reduce follow-up calls to clarify instructions

The new Roche product books

- **Offer a supplement to, not a substitute for, patient contact**
- **Support your specific instructions to the patient**
- **Provide a long-term reinforcement of your oral counseling**

Because you are the primary source of medical information for your patients, we invite you to look over the Roche Product Booklets shown below and ask your Roche representative for a complimentary supply of those applicable to your practice.


You, your medical problem and your treatment with
DALMANE
You, your medical problem and your treatment with
BACTRIM
brand of trimethoprim and sulfamethoxazole/Roche
You, your medical problem and your treatment with
LIBRIUM
You, your medical problem and your treatment with
VALIUM
You, your medical problem and your treatment with
LIMBITROL
ROCHE MEDICATION ME EDUCATION

ROCHE MEDICATION ME EDUCATION

Medicines that matter from people who care

COMMITTED TO EXCELLENCE

ROCHE

PRESIDENT'S ACHIEVEMENT AWARD

Presenting the winners of the 1987 Roche President's Achievement Awards

Hoffmann-La Roche is pleased to honor these outstanding sales representatives, chosen for their unparalleled dedication to the health-care field, professionalism and consistent high level of performance. Please join us in congratulating these exceptional individuals.

Susan D. Arnett

Michael D. Chandler

Verle F. Englerth

Mark J. Gude

Barry E. Holzbach

Kermit J. Hoover

Glenn J. Horstdaniel

Smith L. Miller

Michael H. Paggi

Donald R. Pettke, Jr.

Deborah L. Roberson

Ardie L. Segars, Jr.

Charles W. Shelley

Ronald L. Vaughn

John W. West

George A. Young

Turn to the following page and find out how your award-winning Roche representative can help both you *and* your patients.

TexasMedicine

VOLUME 83 APRIL 1987

Contents

ARTICLES

30 Motorcycle deaths and injuries in Texas: helmets make a difference
Linda E. Lloyd, MSW, MBA; Mary Lauderdale, MA; Thomas G. Betz, MD

36 Thyroid sonography—first choice for diagnosis?
Terry J. DuBose, BA, ARDMS; Edward Poole, MD; Walter Hennigan, MD; Larry Hill, MD; Robert Askew, MD; Bruce Hurt, MD

41 How your practice can cope with change
Leif C. Beck, LLB; Geoffrey T. Anders, JD; Dorothy R. Sweeney

45 Epidural anesthesia during labor and the incidence of forceps delivery
Susan M. Cox, MD; J. Edgar Bost, MD; Sebastian Faro, MD, PhD; Robert J. Carpenter, MD

49 Intracoronary vs intrapulmonary arterial streptokinase infusion for MI
Linley E. Watson, MD; Guy A. Wells, MD; Edwin E. Terry, MD; Troy H. Williams, MD; Argye Hillis, PhD

57 Cancer update: Colorectal health CHECK: a strategy for prevention
Anthony J. Mastromarino, PhD

EDITORIALS

5 How many deaths will it take?
Raj K. Narayan, MD

6 International System of Units debuts in *Texas Medicine*
Jim Busby

6 Occupational, personal physicians need to communicate
Bruce D. Kenamore, MD

7 Delegates seek your opinion on Health Policy Agenda
Val F. Borum, MD

FEATURE

83 Houston: A vibrant backdrop for TMA's 120th Annual Session

NEWS

TMA in action
14 TMA-HMSS to consider under-utilization of services
14 TMA councils review Health Policy Agenda
14 Leave the past behind, Dr. Sammons advises physicians
14 Committee selects article for Harriet Cunningham Award
15 Marilyn Baker rejoins staff as division director

Health line
15 NIH panel issues report on HTLV-III antibody testing
15 Law requires reporting of occupational diseases

Socioeconomics
22 TMA legal staff explains MAAC limits
22 TMA members to participate in debate on health care
22 MAACs are unfair, Whittington tells audience
23 AMA prepares booklet on DRGs for physicians

Capital comments
23 Liability premiums will rise without tort reform, study shows
23 Board modifies policies on CME, TDMHMR
25 House continues study of medical discipline bill
25 Improved discipline necessary for public faith, Edwards says
26 Newsmakers

DEPARTMENTS

9 Letters
79 Clinical abstracts
80 Information for authors
86 Medicine and the law: Is there a statute of limitations in a medical professional liability lawsuit?
90 Deaths
94 Medicine in literature
109 Continuing education directory

ON THE COVER

"The repeal of the motorcycle helmet law in Texas has been extremely costly in terms of deaths, debilitating injuries, and financial burden," write the authors of this month's cover article, "Motorcycle deaths and injuries in Texas: helmets make a difference." A recipient of the Harriet Cunningham Citation for Meritorious Scientific Writing, the article (page 30) was written by Linda E. Lloyd, MSW, MBA; Mary Lauderdale, MA; and Thomas G. Betz, MD. Cover design by Ed Triggs.

COMING NEXT MONTH

Scheduled for the May issue of *Texas Medicine* are articles on indigent health care, pregnancy and brucellosis, coagulopathies in cancer, private physicians as medical educators, and rubella susceptibility in the childbearing population of rural East Texas.

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

Harold R. High, MD, Cuero
Secretary

Merle W. Delmer, MD, San Antonio
James M. Graham, MD, Austin
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

Jim Bob Brame, MD, Eldorado
President

Nancy W. Dickey, MD, Richmond
Vice President

David Vanderpool, MD, Dallas
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Robert G. Mickey
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd. Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B Jones, News Editor
Shari Henson, Production Manager/ Editorial Assistant
Patty Illich, Administrative Secretary/ Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
L. Maximilian Buja, MD, Dallas
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates, plus 7.25% state sales tax for Texas subscribers only, are: Members, $16 per year plus $1.16 sales tax, nonmembers and institutions, $20 per year plus $1.45 sales tax; foreign, $24 US currency; single copy, $2 plus $.15 sales tax.

Second class postage paid at Austin, Texas, and additional mailing office.

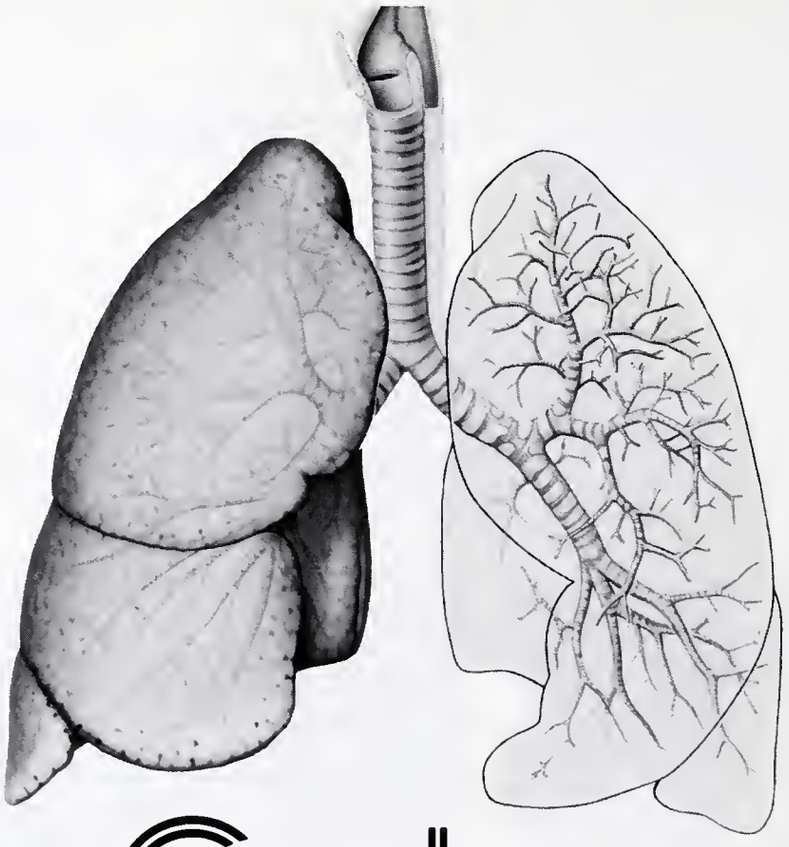
Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701.

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701

Consider the causative organisms...



Ceclor®
cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae*, *H influenzae*, *Streptococcus pneumoniae*, *Streptococcus pyogenes
(ampicillin-susceptible) (ampicillin-resistant)

Note: Ceclor® is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae, Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci).

Contraindications: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- In renal impairment, safe dosage of Ceclor may be lower than that usually recommended. Ceclor should be administered with caution in such patients.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, erythema multiforme, serum-sickness-like reactions): 1.5%; usually subside within a few days after cessation of therapy. These reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children)
- Abnormal urinalysis; elevations in BUN or serum creatinine
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly)

© 1986, ELI LILLY AND COMPANY [060485LR]

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

600332

How many deaths will it take?

There is an urgent need to reinstate mandatory helmet laws for all motorcyclists in Texas. As the article by Lloyd et al in this issue of *Texas Medicine* (page 30) points out, without such a law at least 30 people die on Texas highways needlessly each month. These deaths would not occur if the riders had been wearing helmets. One previous analysis has shown that for every person killed in motorcycle accidents, about 86 cyclists survive accidents with permanent disability (1). This is not a complex issue. The facts are clear and have been painfully obvious for some time. For those who have not observed events leading to the present sad state of affairs, the history of this issue follows.

Before 1967, only three states had motorcycle helmet laws. In 1967, a federal standard for state highway safety was established, which required states to pass such laws in order to qualify for certain federal highway funds. By 1975, all but three states had passed laws requiring all motorcyclists to wear helmets (2). Motorcycle fatality rates dropped by 30% after the introduction of these laws (3). With a simple masterful piece of legislation, Congress had lowered the mortality from motorcycle accidents more effectively than rapid transportation of patients, intensive care, medications, and protracted rehabilitation could ever hope to achieve. Unfortunately, in 1976 Congress voted to remove the financial penalties for noncompliance with the safety program. Soon thereafter, as a result of active lobbying by certain groups, more than 35 states either eliminated the helmet law or limited its applicability (4).

In Texas, since August of 1977, only motorcyclists under 18 years of age have had to wear protective helmets. The enormous senselessness of this decision would have probably shaken even our founding fathers' faith in democracy. Baker succinctly describes the frustration experienced by those who have witnessed the result of this ill-conceived decision: "It was as if scientists, having found a successful treatment for a disease, were impelled to further prove its efficacy by stopping the treatment and allowing the disease to recur" (5). And recur it did. It was found that in states in which helmet laws were repealed, helmet use dropped by about half and deaths increased by 38% (2). As documented by Lloyd et al in their current study, the figures in Texas were even more dramatic: The number of fatalities in the post-repeal years increased by 73% and fatal head injuries by 137% as compared to the pre-repeal years. In 1985 alone, 364 motorcyclists were killed and over 10,000 were injured in Texas. The statistics are clear and almost identical experiences have been reported from various states including Kansas (4,6), Colorado (4), Oklahoma (4), North and South Dakota (4,7), Indiana (8), South Carolina (9), and Minnesota (10).

Can we not depend on the motorcyclists themselves to look at the facts and to regularly wear a protective helmet? Unfortunately not. As Lloyd et al point out, in 1982, motorcycle helmet usage was observed at 32 different locations in Houston and Dallas, and was noted to be 17% to 72% in the former and 30% to 66% in the latter (11). Prior to the repeal of the helmet law in 1977, more than 90% of the motorcycle casualties wore a helmet. In 1982, the corresponding figure was 20%. The most common cause of death among motorcycle and moped riders is injury to the head and neck (12). There is no question that helmets are effective in significantly reducing the morbidity and mortality associated with motorcycle accidents (4,13,14). Yet the facts are ignored by motorcycle riders in a classic fantasy of adolescent invincibility—it won't happen to me!

An excellent editorial by Russo in the *New England Journal of Medicine* entitled "Easy Rider—Hard Facts: Motorcycle Helmet Laws" (15) summarizes the conclusions reached by an American Medical Association conference in 1977, which addressed some of the most commonly raised objections to helmets (16). The objections and responses are paraphrased here. First allegation: Motorcycle helmets, although reducing head injuries incurred in crashes, increase the incidence of neck injuries. Fact: Cervical spine injuries are possible whether or not the cyclist is wearing a helmet, but helmets do not by themselves contribute to or worsen the injury (17). As a matter of fact, with improved helmet design such injuries could be reduced. Second allegation: Motorcycle helmets reduce the cyclist's peripheral vision and thereby create a safety hazard. Fact: Studies have determined that full coverage helmets provide only minor restriction in horizontal peripheral vision—less than 3% from that of an unhelmeted person (18). Third allegation: Motorcycle helmets reduce the cyclist's ability to hear other vehicles in traffic. Fact: A helmeted motorcyclist can hear a sound of interest approximately as well as a driver in an automobile when the windows are closed (19). Fourth allegation: The weight of the helmet increases rider fatigue and thus causes accidents. Fact: No documented evidence has been produced to support this argument.

The major issue raised by opponents of helmet laws is that of personal freedom (5). Again, drawing from Russo's editorial (15), it is hard to improve on this passage from the US Supreme Court judgment upholding the Massachusetts motorcycle helmet law in 1972. "While we agree with the plaintiff that the act's only realistic purpose is the prevention of head injuries incurred in motorcycle mishaps, we cannot agree that the consequences of such injuries are limited to the individual who sustains the injury. The public has an interest in minimizing the resources directly involved. From the moment of injury, society picks the person up off the highway; delivers him to a municipal hospital and municipal doctors; provides him with unemployment compensation if, after recovery, he cannot replace his lost job, and if the injury causes permanent disability, may assume the responsibility for his and his family's subsistence. We do not understand a state of mind that permits the plaintiff to think only he himself is concerned."

The article by Lloyd et al in this issue brings home this fact again with striking clarity. Unhelmeted riders average twice as many days in the hospital (22.2 versus 10.3 days), have 2½ times larger hospital bills ($17,155 versus $7,211), and are less likely to carry hospital insurance (27% versus 41%). It has been calculated that nationwide at least $61 million could be saved annually if all motorcyclists were to use helmets (14,20) and that 600 fewer people would die per year (21). It is obvi-

ous that these patients represent an enormous financial burden on public hospitals, the rehabilitation system, and on tax-paying citizens who support these institutions.

I invite our legislators and those opposed to helmet laws to spend a few nights in our busy emergency rooms. Let them talk to a few devastated mothers and fathers of sons with severe head injuries—many of whom will needlessly die or remain severely disabled. A civilized society makes laws not only to protect a person from his fellowman, but also sometimes from himself as well. Over 1,000 excess deaths have occurred on Texas highways since 1977. Neither from an ethical, legal, financial, or common sense point of view, can we afford to ignore the facts any longer.

RAJ K. NARAYAN, MD
Chief of Neurosurgery, Ben Taub General Hospital, and Assistant Professor, Department of Neurosurgery, Baylor College of Medicine, 6501 Fannin, A-405, Houston, TX 77030.

REFERENCES

1. US Department of Transportation. Office of Public Affairs: Fact Sheet: Motorcycle Helmets—They Save Lives and Reduce Injuries. Washington, DC, June 19, 1978.
2. Watson GS, Zador PL, Wilks A: The repeal of helmet use laws and increased motorcyclist mortality in the United States, 1975–1978. Am J Public Health 70(6):579–585, 1980.
3. Robertson LS: An instance of effective legal regulation: motorcycle helmet and daytime headlamp laws. Law and Soc Rev 10:467–477, 1976.
4. McSwain NE Jr, Petrucelli E: Medical consequences of motorcycle helmet nonusage. J Trauma 24(3):233–236, 1984.
5. Baker SP: On lobbies, liberty, and the public good, editorial. Am J Public Health 70(6):573–575, 1980.
6. McSwain NE Jr, Lummis M: Impact of repeal of motorcycle helmet law. Surg Gynecol Obstet 151(2):215–224, 1980.
7. Heilman DR, Weisbuch JB, Blair RW, et al: Motorcycle-related trauma and helmet usage in North Dakota. Ann Emerg Med 11(12):659–664, 1982.
8. Scholten DJ, Glover JL: Increased mortality following repeal of mandatory motorcycle helmet law. Indiana Med 77(4):252–255, 1984.
9. McHugh TP, Raymond JI: Safety helmet repeal and motorcycle fatalities in South Carolina, letter. J SC Med Assoc 81(11):588–590, 1985 and 82:97–100, 1986.
10. Carr WP, Brandt D, Swanson K: Injury patterns and helmet effectiveness among hospitalized motorcyclists. Minn Med 64(9):521–527, 1981.
11. Lock J, Hatfield NJ, Simpson CH: Texas Motorcyclists Survey. Motorcycle Safety Foundation, Chadds Ford, Pennsylvania, Dec 1982.
12. Graham JW: Fatal motorcycle accidents. J Forensic Sci 14(1):79–86, 1969.
13. Hurt HH, Ouellet JV, Thom DR: Motorcycle accident cause factors and identification of countermeasures. Vol 1, Technical Report, DOT-hs-805–862, Springfield, VA, NTIS, 1981.
14. Muller A: Evaluation of the costs and benefits of motorcycle helmet laws. Am J Public Health 70(6):586–592, 1980.
15. Russo PK: Easy rider—hard facts: motorcycle helmet laws. New Engl J Med 499(19):1074–1076, 1978.
16. American Medical Association: Head protection for the cyclist: a medical injury. Chicago, Il, 1977.
17. Johnson P, Buchanan L, Levy P: Motorcycle safety: the case for helmet use. NHTSA Technical Note, DOT Publication HS 801–836, Feb 1976.
18. Field of view with and without motorcycle helmets. NHTSA Technical report. DOT Publication HS 810–758, Oct 1975.
19. Effects of safety helmets on auditory capability. DOT Publication HS 801–759, Washington, DC, Government Printing Office, 1977.
20. Hartunian NS, Smart CN, Willemain TR, et al: The economics of safety deregulation: lives and dollars lost due to repeal of motorcycle helmet laws. J Health Polit Policy Law 8(1):76–98, 1983.
21. Watson GS, Zador PL, Wilks A: Helmet use, helmet use laws, and motorcyclist fatalities. Am J Public Health 71(3):297–300, 1981.

International System of Units debuts in *Texas Medicine*

Beginning with this issue, *Texas Medicine* will use the International System of Units (SI units, or Systéme International d'Unités) along with conventional units to report laboratory findings. The addition of SI units is the journal's contribution to a broader effort by a number of organizations to bring US medical journals into compliance with the world medical community's standard language for reporting laboratory results.

The advantages of making the conversion to SI units—and of doing so gradually—are clearly outlined in an article published in the *Journal of the American Medical Association* (1). The Editorial Committee of *Texas Medicine* hopes that the use of both conventional and SI units will enhance the journal's usefulness among foreign readers, facilitate the transition for US physicians, and reduce the risk of error that may occur with such change.

JIM BUSBY
Articles Editor, *Texas Medicine*

REFERENCES

1. Now read this: the SI units are here (Editorial). JAMA 255(17):2329–2339, 1986.

Occupational, personal physicians need to communicate

One of the most vexing problems in industrial medicine is determining the ability of an employee to work after an illness or injury. Frequently the problem is complicated by lack of communication between the employee's personal physician, the occupational physician, and the employee's supervisor. At times there may also be a lack of candor on the part of one or more of these parties.

The problem has several aspects. The most common is the employee who presents to the company physician with a "re-

turn to work slip" with excessively strict work restrictions such as, "not to lift more than 5 lb for the next five months." This effectively precludes any work for a blue-collar worker and usually does nothing for his rehabilitation. Many requests such as this are written unthinkingly or without knowledge of the work place. A telephone call from the occupational physician to the employee's physician should result in an agreement on work restrictions that will protect the employee, promote his or her rehabilitation, and allow meaningful work.

The occupational physician has the final responsibility for determining whether an employee can safely work. It is disappointing and insulting to request information about an employee's fitness and restrictions, only to be "stonewalled" by an office employee. Certainly there should be no adversarial relationship between physicians involved.

Another problem arises when an employee returns with reasonable, temporary work restrictions only to be told by a supervisor that there is no work for him or her. Many times there really isn't a job available for which he or she is qualified, but all too often the supervisors feel they can't be bothered with a less-than-able-bodied worker, or that it would somehow set a "bad precedent" to have people on the job but not doing their regular work. I submit that these situations are often handled unevenly and whimsically.

The occupational physician may add to the problem, since the easiest way to handle unreasonable work restrictions is to go along with them rather than to seek the information needed to make an independent judgment. It is also tempting not to rock the boat when faced with a policy of "able-bodied workers only."

Obviously, there are external forces on all parties, and often they come from the employee. However, the best policy would be for the private physician and the occupational physician to agree on relevant, reasonable restrictions that will allow the employee to return to productive work. This way everyone, including society, is a winner.

BRUCE D. KENAMORE, MD
Chief Physician, Amoco Chemicals Company, PO Box 568, Texas City, TX 77590.

Delegates seek your opinion on Health Policy Agenda

The Health Policy Agenda (HPA) for the American People has been under review since 1982. Now, we at the grassroots have a chance to help refine the details of this framework for our nation's future health policies.

The HPA is an initiative of the American Medical Association and other national groups, but it is neither an AMA nor a TMA document. It will, however, be evaluated by the AMA House of Delegates in June, and the Texas delegation to the AMA will represent us in those deliberations.

During the 1987 annual session in Houston, the Texas Medical Association's House of Delegates will review the 195 HPA recommendations. These will be published in a Supplementary Handbook, and divided among the reference committees according to subject area. Each reference committee will devote a portion of its hearings to the HPA items under its purview.

All TMA members are welcome and encouraged to attend and participate in these hearings. Our delegates to the AMA need to know our views in order to represent us at the national level. Our unique insight into the field of medicine, and our experience in providing medical care to the American people, can influence plans for tomorrow's health care.

Since the HPA was begun by the American Medical Association in 1982, it has been guided by a 37-member Steering Committee. The work on the agenda involved 425 representatives from 172 different health, health-related, business, labor, government, and consumer groups. Their mission was to examine the immediate health concerns of today, the next decade, and into the next century.

The HPA Steering Committee's report, which was published in the March 6, 1987, issue of JAMA, states that the participants envision a system that provides cost-effective quality health care to all individuals in the nation. There is also an intent to clarify the roles and responsibilities of patients, payors, government, and business in order to result in more efficient use of health care resources.

The 195 recommendations cover six subject areas: supplying the professionals, providing the technology and facilities, organizing the resources, communicating health information, paying the bill, and preparing for the future through research.

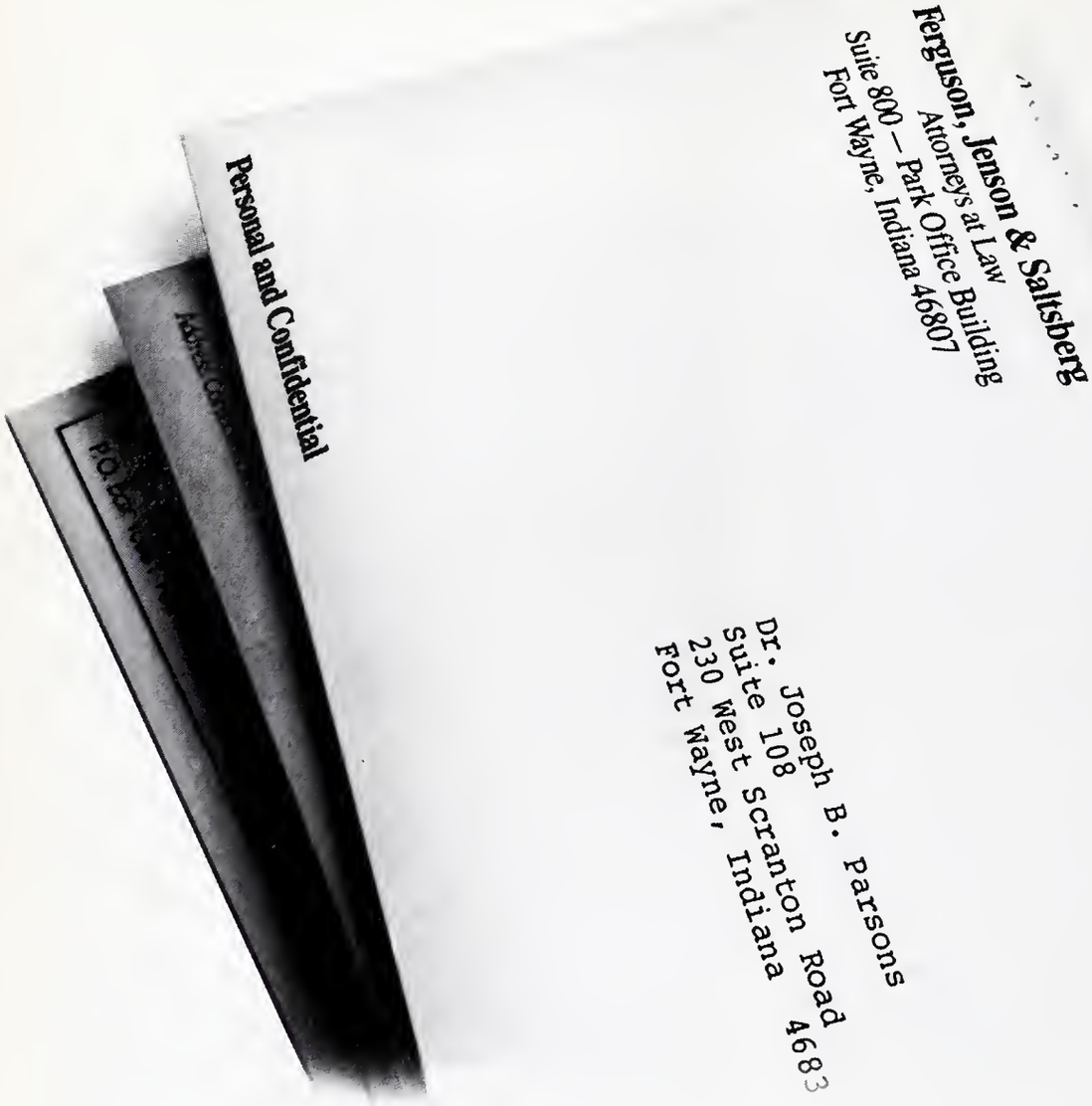
May I personally urge you to acquaint yourself with this document, and to make your views known at the reference committee hearings of the TMA House of Delegates.

Reference committee hearings will be held on Thursday, May 14, at 10 am in the Albert Thomas Convention and Exhibit Center in Houston.

See you there!

VAL F. BORUM, MD
Speaker, TMA House of Delegates, 800 Fifth Ave, Suite 418, Fort Worth, TX 76104.

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

Folk medicine: economics, biology, and culture

The series of articles on folk medicine published by *Texas Medicine* has been both interesting and informative. I would like, however, to add to Dr Ripley's and Mr Adams' discussion of the reasons for the use of traditional remedies. In addition to economic and biologic reasons for the use of traditional remedies, there is another, and perhaps more compelling, reason—culture.

Although in Texas we may be more aware of and concerned with the Mexican-American tradition, folk medicine permeates every society and culture to a greater or a lesser degree. In addition, every ethnic enclave forms a reservoir of folk tradition. The Puckett Collection, a compilation of popular beliefs in Ohio, chronicles the persistence of German folk beliefs, even though people of German extraction have been integrated into the mainstream of American life for several generations (1). The *Rhode Island Medical Journal* in 1982 reported on the widespread use of herbal remedies among Portuguese groups in Rhode Island and Massachusetts, even though this group uses and is well integrated into the health care system (2). Another study traced the retention of a folk-healing practice through four generations of Greek Americans (3). While the practice had diminished by the fourth generation, they continued to be knowledgeable about the custom.

In preliminary data from research at Texas Tech, we are finding a similar situation (4). The use of herbal remedies does not appear to be dependent on socioeconomic status. It has adherents with no education and those with college education, and the distribution does not appear to be significantly different.

It is too simple an answer to explain the use of herbal remedies and folk medicine as a by-product of economics. Roots and enculturation are probably more important determinants of such health and illness behavior.

KAE HENTGES, EDS, MSPH
Department of Family Medicine, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

REFERENCES

1. Hand WD, Casetta A, Thiederman SB: Popular beliefs and superstitions: a compendium of American folklore (from the Ohio collection of Newbell Niles Puckett), vol 3, Boston, Mass, G. K. Hall, 1981, pp 1539–1541.

2. Monteiro LA: Folk remedies of Rhode Island's Portuguese-American immigrants. RI Med J 65(8):324–328, 1982.

3. Tripp-Reimer T: Retention of a folk-healing practice (matiasma) among four generations of urban Greek immigrants. Nurs Res 32(2): 97–101, 1983.

4. Marsh W, Hentges K: Unpublished data.

Young physicians to seek new TMA section in May

Organized medicine is a mutual association of individuals concerned with the betterment of their profession. Like some other groups, it has been criticized for requiring its young members to "pay their dues" by spending months to years observing the process before they are allowed full involvement.

That situation is changing.

The leadership has recognized the importance of young physicians' involvement and development to provide for growth and vitality of organized medicine. As a result, medical student and resident physician sections were developed in the 1970s to provide the input of those groups into the House of Delegates and councils and committees, to offer educational experiences for those involved, and to increase membership growth.

As these younger members finish their training and enter practice, they find barriers, such as provisional membership, to prevent them from becoming involved. This occurs at all levels of organized medicine—local, state, and national.

The physician who is under the age of 40 or within the first five years of practice represents a sizable and growing constituency of organized medicine. In 1983, 42% of the entire physician population in the United States was under the age of 40. In that group, the percentage of women (19%) is nearly double that among physicians age 40 and over. Young physicians are more likely to be in an employed status (53%) (1). Despite unique needs, young physicians share common concerns with all physicians (eg, resolving professional liability, reducing government regulation of medicine, improving public image of physicians, and advocating high quality of care) (2).

To provide a voice at the national level, the American Medical Association formed a young physician section and invited each state to send a delegate and alternate delegate to its inaugural meeting in conjunction with the AMA House of Delegates interim session in December 1986. More than 40 states were represented, including Texas. Besides direct input into organized medicine, it was hoped that this would provide a tool for membership growth (31% of physicians under age 40 are AMA members compared with 52% of those over age 40).

In Texas, in response to similar concerns (58% of physicians under age 40 are TMA members compared with more than 70% of those over age 40), TMA President Jim Bob Brame appointed a steering committee to study the issue of young physicians. Meetings were held in conjunction with the 1986 TMA fall conference and the TMA House of Delegates interim session, which young physicians involved in organized medicine were invited to attend. Concerns about representation, involvement, and barriers were expressed with members of larger county societies experiencing more frustrations. The concept of a young physician section within the Texas Medical Association was approved, and a resolution to form one will be presented at the 1987 TMA annual session.

All young physicians are invited to attend the meeting on Saturday, May 16, 2–5 pm, in Room 110, Albert Thomas Convention Center, Houston. In addition to the organizational meeting, a program on contract evaluation will be presented.

The TMA continues to respond to the needs of its membership. The establishment of a young physician section will help the medical profession remain strong in its pursuit of the highest quality care for our patients.

JIM ROHACK, MD
Chairman, TMA Steering Committee on Young Physicians

REFERENCES
1. American Medical Association Masterfile.
2. Report FF of Board of Trustees, Young Physicians in Organized Medicine; Report B of Council on Constitution and Bylaws, Special Section for Young Physicians. Proceedings, AMA annual meeting, 1986.

Alzheimer's disease issue provides useful coverage

I am writing this letter to let you know how delighted I was with the January issue of *Texas Medicine*. It addressed one of the major issues in geriatric medicine in a very thorough and useful way. As chairman of the TMA Committee on Aging and Nursing Homes, I am delighted that you have given geriatric issues such great support. I am very hopeful that in the future other issues will also be equally well presented by *Texas Medicine*.

J. HOWARD FREDERICK, MD
8711 Village Dr, Suite 318, San Antonio, TX 78217–5485.

TEXAS MEDICAL ASSOCIATION

HealthWise Series

A collection of educational brochures for your patients

Tobacco Products
Hazards You Could Live Without

Blood Donation
Give Blood So Others Can Live!

Becoming a Physician
The Challenge of Medicine

Accidents—
They Don't Just Happen

Health Fraud
The Voice of Misinformation

Immunizations—
Investing in a Healthy Future

Putting Together the Health Care Puzzle

Your Health is in Your Hands

Drunken Driving
Everyone's Problem

You and Your Doctor
Partners in Health Care

Love Sick
Sexually Transmitted Diseases

Click—
The Sound of Saving a Life

Feeling Good Means Being Health-Wise

Aging in Good Health

Good Health—
Does It Have to Cost a Lot?

Call or write for free samples and order form:
Texas Medical Association
1801 North Lamar Boulevard
Austin, Texas 78701
512/477/6704, Ext. 212

Un-switch-ables

Patients and physicians alike prefer

Transderm-Nitro®
nitroglycerin

Over half a billion* patches prescribed in the U.S. since 1982

The only patch with a rate-limiting membrane

Familiar, distinctive tan color and unique shape recognized by patients everywhere

The higher the turnover the greater the profits

There's no substitute for experience

C I B A

(See Brief Summary of Prescribing Information on the next page.)

*Data on file, CIBA Pharmaceutical Co.

629-7750-A

Transderm-Nitro®
nitroglycerin
Transdermal Therapeutic System

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE INSERT)

INDICATIONS AND USAGE
This drug product has been conditionally approved by the FDA for the prevention and treatment of angina pectoris due to coronary artery disease. The conditional approval reflects a determination that the drug may be marketed while further investigation of its effectiveness is undertaken. A final evaluation of the effectiveness of the product will be announced by the FDA.

CONTRAINOICATIONS
Intolerance of organic nitrate drugs, marked anemia, increased intraocular pressure or increased intracranial pressure.

WARNINGS
In patients with acute myocardial infarction or congestive heart failure, Transderm-Nitro system should be used under careful clinical and/or hemodynamic monitoring.
In terminating treatment of anginal patients, both the dosage and frequency of application must be gradually reduced over a period of 4 to 6 weeks to prevent sudden withdrawal reactions, which are characteristic of all vasodilators in the nitroglycerin class.
Transdermal nitroglycerin systems should be removed before attempting defibrillation or cardioversion because of the potential for altered electrical conductivity which may enhance the possibility of arcing, a phenomenon associated with the use of defibrillators.

PRECAUTIONS
Symptoms of hypotension, such as faintness, weakness or dizziness, particularly orthostatic hypotension may be due to overdosage. When these symptoms occur, the dosage should be reduced or use of the product discontinued
Transderm-Nitro system is not intended for immediate relief of anginal attacks. For this purpose occasional use of the sublingual preparations may be necessary

ADVERSE REACTIONS
Transient headaches are the most common side effect, especially when higher doses of the drug are used. These headaches should be treated with mild analgesics while Transderm-Nitro therapy is continued. When such headaches are unresponsive to treatment, the nitroglycerin dosage should be reduced or use of the product discontinued.
Adverse reactions reported less frequently include hypotension, increased heart rate, faintness, flushing, dizziness, nausea and vomiting. These symptoms are attributable to the known pharmacologic effects of nitroglycerin, but may be symptoms of overdosage. When they persist the dose should be reduced or use of the product discontinued. In some patients, dermatitis may occur.

OOSAGE AND ADMINISTRATION
Therapy should be initiated with application of one Transderm-Nitro 5 system to the desired area of skin. Many patients prefer the chest; if hair is likely to interfere with system adhesion or removal, it can be clipped prior to placement of the system. Each system is designed to remain in place for 24 hours, and each successive application should be to a different skin area. Transderm-Nitro system should not be applied to the distal parts of the extremities.
The usual dosage is one Transderm-Nitro 5 system every 24 hours Some patients, however, may require the Transderm-Nitro 10 system. If a single Transderm-Nitro 5 system fails to provide adequate clinical response, the patient should be instructed to remove it and apply either two Transderm-Nitro 5 systems or one Transderm-Nitro 10 system. More systems may be added as indicated by continued careful monitoring of clinical response. The Transderm-Nitro 2 5 system is useful principally for decreasing the dosage gradually, though it may provide adequate therapy for some patients when used alone.
The optimal dosage should be selected based upon the clinical response, side effects, and the effects of therapy upon blood pressure. The greatest attainable decrease in resting blood pressure that is not associated with clinical symptoms of hypotension especially during orthostasis indicates the optimal dosage. To decrease adverse reactions, the size and/or number of systems should be tailored to the individual patient's needs.
Do not store above 86°F (30°C).

PATIENT INSTRUCTIONS FOR APPLICATIONS
A patient leaflet is supplied with the systems.

HOW SUPPLIED

Transderm-Nitro System Rated Release *in vivo*	Total Nitroglycerin in System	System Size	Carton Size
2 5 mg/24 hr	12.5 mg	5 cm^2	30 Systems (NDC 0083-2025-26) *100 Systems (NDC 0083-2025-30)
5 mg/24 hr	25 mg	10 cm^2	30 Systems (NDC 0083-2105-26) *100 Systems (NDC 0083-2105-30)
10 mg/24 hr	50 mg	20 cm^2	30 Systems (NDC 0083-2110-26) *100 Systems (NDC 0083-2110-30)
15 mg/24 hr	75 mg	30 cm^2	30 Systems (NDC 0083-2115-26) *100 Systems (NDC 0083-2115-30)

*Hospital Pack 100's

C85-35 (Rev 11/85)

Dist. by:
CIBA Pharmaceutical Company
Division of CIBA-GEIGY Corporation
Summit, New Jersey 07901

All transdermal nitroglycerin products are being marketed pending final evaluation of effectiveness by the FDA.

© 1986, CIBA. 629-7750-A

C I B A

Tell Your Patients About The Medical Liability Crisis

The professional liability crisis and tort reform are major topics before the Texas Legislature. This revised brochure can help you tell your patients the medical side of the story. It describes the negative impact the crisis is having on health care costs and on access to health care and the courts, and asks your patients to contact their state representatives and senators.

The brochure was prepared by TMA to be used in waiting rooms. It is free to TMA members. Please order in increments of 50.

Please send me ____ copies of the brochure, **"The Medical Liability Crisis: The Cure Is In Working Together."**

Name

Address

City State Zip

Texas Medical Association
Communication Department
1801 North Lamar Blvd.
Austin, Texas 78701
(512) 477-6704, ext. 212

READ IT AND REAP!

Cost per $1000 monthly benefit
TEXAS MEDICAL ASSOCIATION
Long Term Disability Insurance

WHAT YOU PAY . . . based on a 30 day waiting period.

Your Age:	Monthly Cost*	Average monthly cost based on your present age for continuous coverage to age 70:
Less than age 30	$ 6.33	$28.79
30–39	7.33	32.00
40–44	14.83	36.11
45–49	21.83	40.37
50–54	30.67	45.00
55–59	47.33	49.78
60–64	52.17	51.00
65 & Over	49.83	49.83

*Payments are made on a quarterly basis. Costs are based on current rates.

WHAT YOU GET . . . at no additional cost:

- ✓ Bonafide long-term benefits for total disability to age 70—through the critical years.
- ✓ Long term benefits for partial disability.
- ✓ Definition of disability protects you at your medical specialty—all ages.
- ✓ Up to $8000 monthly benefits regardless of other disability insurance you may have.
- ✓ Claim payments are not reduced by monies you may receive from other disability policies, salary continuation, investments, Social Security.
- ✓ During partial disability, pre-disability earnings are automatically increased by 6 percent annually to guard against erosion of amounts payable.
- ✓ Your waiting period for partial disability is the same as you select for total disability.
- ✓ Survivor Benefit.

WHAT YOU DO NOT GET . . .

- ⊘ Costly frills
- ⊘ Termination at 65—during the critical years
- ⊘ Lesser benefit period after age 60 (See example, page 10, TMA brochure)

OPTIONAL COVERAGES . . .

- ✓ Cost of Living Guardian
- ✓ In-hospital Disability Income

If you do not have a TMA Insurance Brochure dated August, 1986
Call 1-800-252-9318

Texas Medical Association
INSURANCE PROGRAM
1901 North Lamar Blvd, Austin, TX 78705
underwritten by
PRUCO Life Insurance Company of Texas
a subsidiary of the Prudential

TMA IN ACTION

TMA-HMSS to consider under-utilization of services

"Under-Utilization in the Delivery of Health Care Services" will be under consideration when Texas Medical Association's Hospital Medical Staff Section meets Saturday afternoon and Sunday, May 16–17. The Hyatt Regency Downtown, Houston, is the setting for the meeting, which is scheduled in conjunction with TMA's 120th Annual Session.

Representatives of the American Medical Association, American Association of Retired Persons, Joint Commission on Accreditation of Hospitals, and Texas Medical Foundation will address the far-reaching implications of under-utilization to consumers and providers. Their presentations will focus on how physicians can modify their practice patterns to cope with administrative requirements imposed by payors of service (indirectly, third-party carriers and government entities), which restrict the scope of health care services, and how to comply with JCAH and peer review organizations' quality assurance requirements.

The TMA-HMSS program also includes a review of appropriate coding and billing techniques and a legislative update. As a last item of business, the section will elect officers and consider reports and resolutions.

The TMA-HMSS comprises physician representatives of 272 hospital medical staffs. Further information on the meeting is available from John Boff, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

TMA councils review Health Policy Agenda

Councils of the Texas Medical Association are reviewing the 195 recommendations in the Health Policy Agenda for the American People (HPA), a guide to cost-effective, quality health care into the next century. TMA's reference committees will consider the councils' recommendations during the May 13–17 annual session, and the TMA delegation will carry final recommendations to the American Medical Association annual meeting in June. The AMA was one of 172 health, health-related, business, government, and consumer groups that participated in the initiative.

The HPA, which was released in February, addresses six subjects: supplying the professionals, providing technology and facilities, organizing resources, communicating health information, paying the bill, and preparing for the future through research. In its report to TMA's Executive Board Feb 8, the Board of Trustees noted that the Councils on Medical Education, Socioeconomics, Health Facilities, Legislation, Scientific Advancement, Communication, and Public Health, and the Board of Councilors work most often in these subject areas.

Leave the past behind, Dr Sammons advises physicians

"I think it's time we stopped living in the past and . . . started to mold the future," James H. Sammons, MD, advised conferees attending Texas Medical Association's 1987 Winter Conference. Dr Sammons, a past president of TMA and the current executive vice president of the American Medical Association, discussed "Old Attitudes, New Realities."

Dr Sammons' presentation was part of a program that followed the theme "Forecast '87, Reading Medicine's Future." During the meeting Feb 7, 1987, at La Mansion Hotel, Austin, experts reviewed peer review and medical discipline and other legislative issues; competition; physicians' fees and reimbursement; and Medicare. The conference attendance was more than 1,000.

Dr Sammons asserted that the solutions to the problems in the medical profession start with the solution to one problem: Doctors today are not accepting new realities, and they are too concerned with old attitudes. "It's great to be nostalgic, provided you don't give too much credence to it, because they're not the 'good old days,'" he said. "I don't think it was all that good the first time around, nor do I believe it's so bad now."

He admonished physicians who scorn members of the profession who prefer large group practice situations or employed positions. "We can be so incredibly self-righteous," he said. "I'm in favor of any practice methodology that protects the patient . . . that's what it's all about," Dr Sammons continued.

Dr Sammons observed that despite the creation of sections that represent medical staff members, students, and residents, organized medicine has not done enough to help the growing number of women physicians and to improve services to the growing elderly population. "I could go on and on," he said of the "new realities" that the profession has ignored.

Dr Sammons concluded by warning his listeners, "There is a revolution in medicine. All of us had better decide we're going to lead it . . . to protect our right to decide what's best for patients. If we don't, someone else will, and that will be the final reality."

Committee selects article for Harriet Cunningham Award

The Editorial Committee for *Texas Medicine* has selected a scientific article about the management of urolithiasis to receive the 1986 Harriet Cunningham Award of Excellence for Meritorious Scientific Writing.

Jan-Peter A. H. Jantzen, MD, was senior author of the article. Dr Jantzen, an anesthesiologist, is associated with the Johannes Gutenberg University Medical School, Mainz, Germany, and the University of Texas Southwestern Medical School, Dallas. The four other authors were anesthesiologists Klaus Erdmann, MD, and Anke M. Klein, MD, and urologist Dirk M. Wilbert, MD, also of the Johannes Gutenberg University Medical School, and anesthesiologist H. A. Tillmann Hein, The University of Texas Southwestern Medical School, Dallas.

The article, which appeared in the December 1986 issue of *Texas Medicine*, was titled, "Management of Urolithiasis: An Analysis of 1,293 Lithotriptor Procedures." The authors examined "extracorporeal shock wave lithotripsy" (ESWL/ESL), which is performed with the patient immersed in water in a special bath. They concluded that considering anesthesiologic and urologic aspects, ESWL is "an elegant, noninvasive treatment of

urolithiasis . . . with risks probably lower than those associated with conventional urological surgery for kidney stones."

Editorial Committee members selected the winner from a field of four articles that received Harriet Cunningham Citations for Meritorious Scientific Writing during the year. The award, named in memory of a longtime managing editor of *Texas Medicine*, recognizes articles of exceptional scientific quality published in the journal. Citations carry a $100 cash award, and the Award of Excellence brings the winner $500.

In addition to "Management of Urolithiasis: An Analysis of 1,293 Lithotriptor Procedures," the following articles received citations:

—"Human Papillomavirus and Cervical Disease in a Mexican-American Community" by Kenneth M. Weiss, PhD; Ruth L. Katz, MD; and Nour Sneige, MD; (July 1986 issue)

—"Brain and Meningeal Biopsy in Patients with Acquired Immunodeficiency Syndrome" by Victor Fainstein, MD; Milam Leavens, MD; Richard Moser, MD; Robert Bray, MD; Eugenie Obbens, MD; W. K. Alfred Yung, MD; Peter Glass, MD; and Peter W. Mansell, MD; (January 1986 issue) and

—"Physicians Practicing in Texas' Freestanding Emergency Centers" by Rose Yunker, PhD; Martha Levine, MAT; and Abdul Sajid, EdD (September 1986 issue).

John A. Mangos, MD, San Antonio, chairs the Editorial Committee for *Texas Medicine*. Other committee members are: L. Maximilian Buja, MD, and Norman M. Kaplan, MD, Dallas; Peter C. Canizaro, MD, and Don E. Flinn, MD, Lubbock; William J. deGroot, MD, Frank H. Gardner, MD, L. Charles Powell, Jr, MD, Luther B. Travis, MD, and Paul R. Young, MD, Galveston; Marvin Forland, MD, Irving A. Ratner, MD, and Ciro V. Sumaya, MD, San Antonio; Irwin Krakoff, MD, Kenneth L. Mattox, MD, and David A. Swanson, MD, Houston; and Glen E. Journcay, MD, Austin.

Marilyn Baker rejoins staff as division director

Marilyn Baker, CAE, has rejoined the Texas Medical Association as director of the Division of Medical Information. She also will serve as director of the office of program planning and monitoring.

Before leaving to establish her own consulting firm, Ms Baker had been executive editor of *Texas Medicine*. She also was director of the TMA department of medical education and scientific affairs.

She is a life member of the International Association of Business Communicators and has served in various capacities at the association's district and local levels. She also is a member of the American Society of Association Executives.

A graduate of The University of Texas at Austin, Ms Baker has a bachelor's degree in journalism and has pursued graduate level studies in economic history.

Marilyn Baker, CAE, has rejoined the TMA staff as director of the Division of Medical Information.

HEALTH LINE

NIH panel issues report on HTLV-III antibody testing

A National Institutes of Health (NIH) consensus development statement on the Impact of Routine HTLV-III Antibody Testing of Blood and Plasma Donors on Public Health may be obtained from the NIH Office of Medical Applications of Research.

The report was prepared by a panel of experts, which considered scientific evidence presented at a consensus development conference at the NIH. It contains recommendations and conclusions concerning the impact of routine HTLV-III antibody testing of blood and plasma donors on public health.

At the National Institutes of Health, consensus conferences bring together researchers, practicing physicians, representatives of public interest groups, consumers, and others to carry out scientific assessments of drugs, devices, and procedures in an effort to evaluate their safety and effectiveness.

Free, single copies of the report, "Impact of Routine HTLV-III Antibody Testing of Blood and Plasma Donors on Public Health," are available from Michael J. Bernstein, Office of Medical Applications of Research, National Institutes of Health, Building 1, Room 216, Bethesda, MD 20892.

Law requires reporting of occupational diseases

The Texas Department of Health reminds physicians that occupational diseases that are reportable by law are newly confirmed or suspected cases of asbestosis, silicosis, acute occupational pesticide poisoning, and elevated blood lead levels.

The system for reporting these occupational diseases follows that of current communicable disease reports. Physicians and others with case reports are requested to provide the name, address, age, sex, and race of the patient and the diagnosis and date of diagnosis to their local health department or regional health director who, in turn, will trans-

ROCHE®

BECAUSE ONLY VALIUM

2 mg 5 mg 10 mg

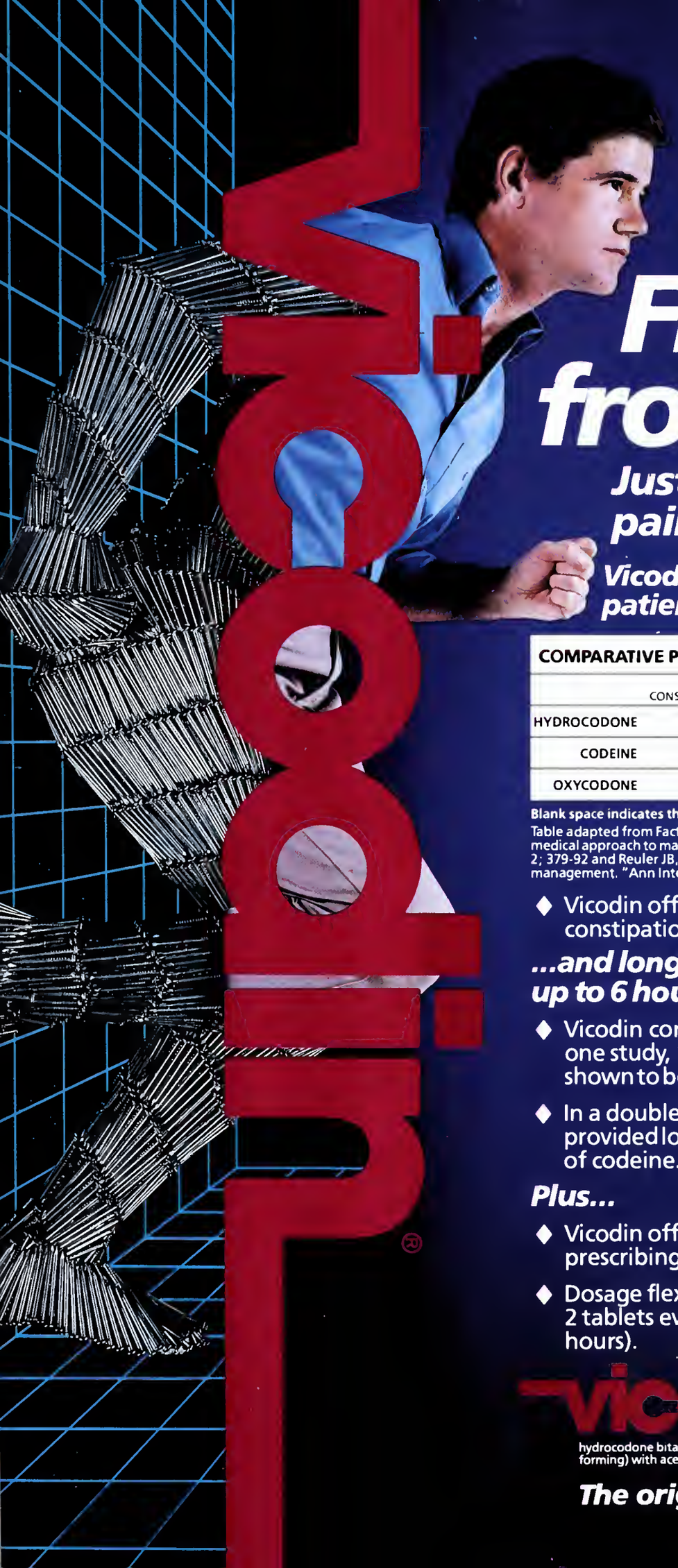
IS ALWAYS VALIUM®

brand of diazepam/Roche®

REMEMBER TO WRITE "DO NOT SUBSTITUTE."
IT'S THE ONE YOU KNOW BEST.

Copyright © 1987 by Roche Products Inc. All rights reserved.

The cut out "V" design is a registered trademark of Roche Products Inc.



Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the original hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. 5685

1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med*, 141:293-300, 1981.

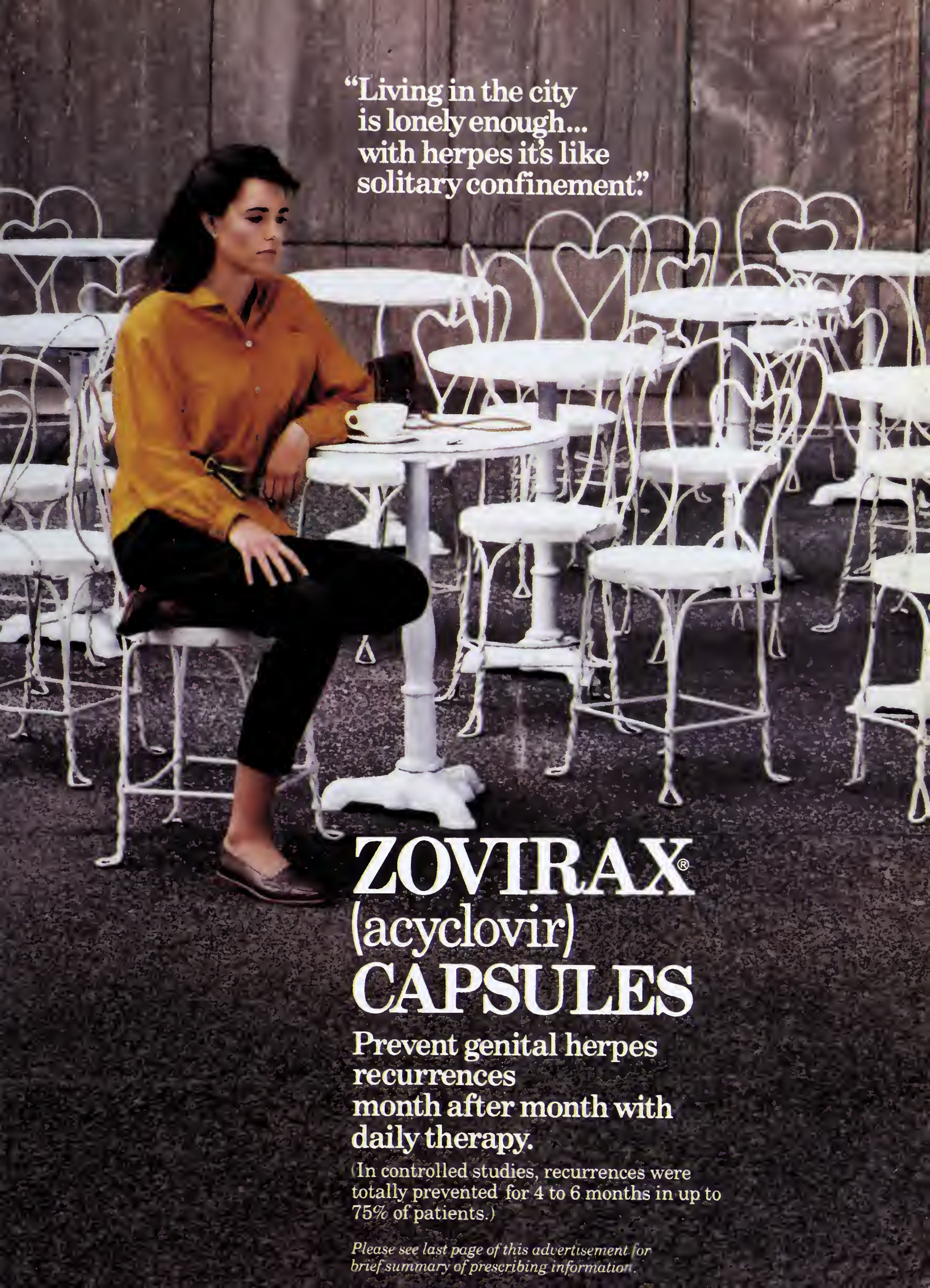
Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

© 1986, BASF K&F Corporation 5768/9-86 Printed in U.S.A.

vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.


"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."
ZOVIRAX®
(acyclovir)
CAPSULES
Prevent genital herpes
recurrences
month after month with
daily therapy.
(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)
Please see last page of this advertisement for
brief summary of prescribing information.

ZOVIRAX® (acyclovir) CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page.

Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies,. the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤10 ml/min/1.73/m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200"- Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Wellcome | **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

Copr. © 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5

mit the information to the Texas Department of Health, Bureau of Epidemiology. Reports also may be made directly to the bureau by calling the toll-free number, 1–800–252–8239. Bureau staff then will contact the initiator of the report to obtain more information.

The Texas Occupational Disease Reporting Act became effective Oct 15, 1985. During the first year, the Texas Department of Health received 616 reports of elevated blood lead levels due to occupational exposure in 181 individuals who worked in 26 companies in 15 Texas counties. The majority of the elevated blood lead cases were reported to TDH by testing laboratories. In all but five cases, lead testing was initiated by the company in response to Occupational Safety and Health Administration regulations. "The success of the first year of lead reporting is due largely to support received from physicians, laboratories, and local and regional health departments throughout the state," reports the TDH in *Texas Preventable Disease News* (vol 46, no 48).

Questions about occupational disease reporting should be addressed to the Environmental Epidemiology Division, Bureau of Epidemiology, TDH, 1100 W 49th St, Austin, TX 78756–3180; phone (512)458–7268 or STS 824–9268.

SOCIOECONOMICS

TMA legal staff explains MAAC limits

Texas Medical Association's legal staff has provided additional information with respect to a cover letter that Blue Cross and Blue Shield of Texas, Inc, mailed with the documents "1987 MAAC—Base Period Report" and "1987 MAAC—50th Percentile Report."

The last paragraph of the letter, which was mailed in January 1987, is not completely accurate. As written, the paragraph reads, "Please remember that the MAAC is a limitation on how much nonparticipating physicians can bill for services rendered to Medicare beneficiaries. Your charging practices will be monitored and if the weighted average of your actual charges for the year exceeds the MAAC you may be subject to sanctions, such as exclusion from the Medicare program or civil money penalties." However, according to the Jan 13, 1987, issue of the *Federal Register*, pages 1383–1384, the higher of the weighted average or median for each procedure will be used to determine if sanctions are appropriate.

TMA members to participate in debate on health care

Representatives from Texas Medical Association have been invited to participate in the State Debate on Health Care—Who Lives? Who Dies? Who Pays? The debate is scheduled April 26–28 in Austin.

TMA members who are participating include TMA President Jim Bob Brame, MD; Ron Anderson, MD; H. Tristram Engelhardt, Jr, PhD, MD; Pedro Vergne-Marini, MD; and Rep Mike McKinney, MD.

The 1987 State Debate on Health Care will begin the process of examining the legal, medical, financial, and ethical issues facing our society. Debaters will offer viewpoints, justifications, and possible solutions to the propositions included under each of the three major areas. Following each debate, a six- to eight-member reaction panel will bring local and personal perspectives before the delegates.

In addition to physicians, other invited delegates include consumers, insurers, attorneys, executive officers, and elected officials, all selected for their expertise and influence in their communities.

State debate delegates will be charged with the responsibility of returning to their communities to develop a network to focus on regional and state health care issues.

The State Debate on Health Care is sponsored by the Texas Foundation for Human Services. Members of the executive committee include: Lan Bentsen, president of Lan Bentsen Interests of Houston, chairman; Lt Gov William P. Hobby; Rep Jack C. Vowell (El Paso); Robert Craig, president of the Texas Division of Beverly Enterprises; Helen Farabee, director of public policy for the Benedictine Health Resource Center; J. Livingston Kosberg, chairman of the Texas Board of Human Services and chairman of the board of First Texas Financial Corp in Houston; and Ruth V.H. Lack, vice president for corporate communications for First Texas Financial Corp in Houston.

Further information on the debate is available from Diane Black, Coordinator, PO Box 49287, Austin, TX 78765, phone (512)450–3008.

MAACs are unfair, Whittington tells audience

Medicare's reimbursement scheme for nonparticipating physicians is controversial and unfair, according to practice management consultant Harold Whittington, Dallas. Mr Whittington shared his views of the system, based on maximum allowable actual charges (MAACs) during Texas Medical Association's 1987 Winter Conference.

Part of the Sixth Omnibus Budget Reconciliation Act, the system replaced the fee freeze that had been imposed on nonparticipating physicians for three and one-half years. The freeze expired Dec 31, 1986. However, Mr Whittington refers to the complex system as "son of fee freeze" because, "It is nothing more than an extension of the fee freeze."

He added that the program has two objectives: (1) to discourage nonparticipating physicians with its complexity, and (2) to encourage patients of nonparticipating physicians to switch to participating physicians. Mr Whittington predicted that MAACs will cause a 40% to 50% increase in the number of participating physicians. "The question is not going to be whether to participate, but whether to see Medicare patients at all," he added. "Every nonparticipating physician in Texas is going to have to roll back his charge on at least one procedure."

A former employee of Blue Cross and Blue Shield of Texas, the state's Medicare carrier, Mr Whittington concluded, "During 21 years of working with Medicare, I have never seen anything this controversial and unfair."

The winter conference was held in Austin, Saturday, Feb 7.

AMA prepares booklet on DRGs for physicians

As a service for the profession, the American Medical Association has prepared *Physician Reimbursement under DRGs: Problems and Prospects*, a booklet that focuses on the potential problems that would be experienced under such a reimbursement system.

Developed as the third volume in AMA's Prospective Pricing System (PPS) Informational Series, the publication is particularly timely as the administration is pressing to include Medicare payments for services provided by radiologists, anesthesiologists, and pathologists in the hospital's DRG payment.

The booklets may be purchased for $2.50 a copy in lots of five to nine, the minimum order; $2.30 a copy in lots of 10 to 49; and $2.10 a copy in lots of 50 or more. Orders and inquiries should be sent to Order Department, OP-232, American Medical Association, PO Box 10946, Chicago, IL 60610, phone (312) 280–7168.

CAPITAL COMMENTS

Liability premiums will rise without tort reform, study shows

Increases in professional liability insurance premiums for Texas physicians are inevitable unless changes in tort laws are made, according to a study of nine years of medical liability insurance claims in Texas. Further, a researcher working with Texas Medical Association predicts that tort reforms eventually could lower professional liability insurance premiums by more than 27%.

John Lomenzo, Austin, president of the Texas Medical Liability Trust (TMLT), revealed the results of an independent actuarial study during a news conference at the capitol Thursday, Feb 26. TMLT, American Physician Insurance Exchange, and the Medical Protective Company supplied data for the study on settled, or "closed," claims. The three companies provide liability insurance for 60% of Texas physicians, "a credible data base," Mr Lomenzo pointed out.

According to the study, current premiums and the projected income from the investment of premiums will not cover future claims payments without significant increases in the premiums paid by doctors. The study projects that once all claims related to policies written from 1978 through 1986 are made—and these payments will be made for as long as 15 years—losses and overhead payments will exceed income by almost $170 million.

Donald R. House, PhD, Bryan, executive vice president of RRC, Inc, told the press that medical professional liability insurance premiums could be reduced by more than 27% if the Texas Legislature adopts reforms that (1) offset collateral sources of claims payments against the final judgment, (2) allow structured payments for future damages, and (3) impose limitations and reporting requirements for attorneys' contingent fee contracts. Dr House is TMA's economic research consultant.

Mike Mullin, Fort Wayne, Ind, president of The Medical Protective Company, noted that the reduction would not be seen until "perhaps three to five years down the road." He added, "(A premium reduction) doesn't happen overnight. We didn't get ourselves into this situation overnight."

Also on hand to answer questions from the press was E. Don Webb, MD, a consultant to TMA's Committee on Professional Liability.

Board modifies policies on CME, TDMHMR

Texas Medical Association's Executive Board has approved recommendations that could significantly modify long-standing policies. The recommendations to (1) support mandatory continuing medical education (CME) as a condition of relicensure, and (2) withdraw defense of a statutory requirement that the commissioner of the Texas Department of Mental Health and Mental Retardation be a physician. The latter move was predicated on proposals to provide for a physician medical director who would provide medical leadership and assume responsibility for clinical services.

Meeting in Austin Sunday, Feb 8, the board also approved a request from the Board of Trustees for a $100 voluntary contribution solicitation program of all

John Lomenzo (left) and E. Don Webb, MD, field questions during a press conference in Austin.

AIM HIGH

AIR FORCE MEDICINE

AN ATTRACTIVE ALTERNATIVE TO PRIVATE PRACTICE

Are you sick of the paperwork battle? Are you more familiar with the latest computer technologies instead of those of your specialty? Are supply and equipment problems getting you down?

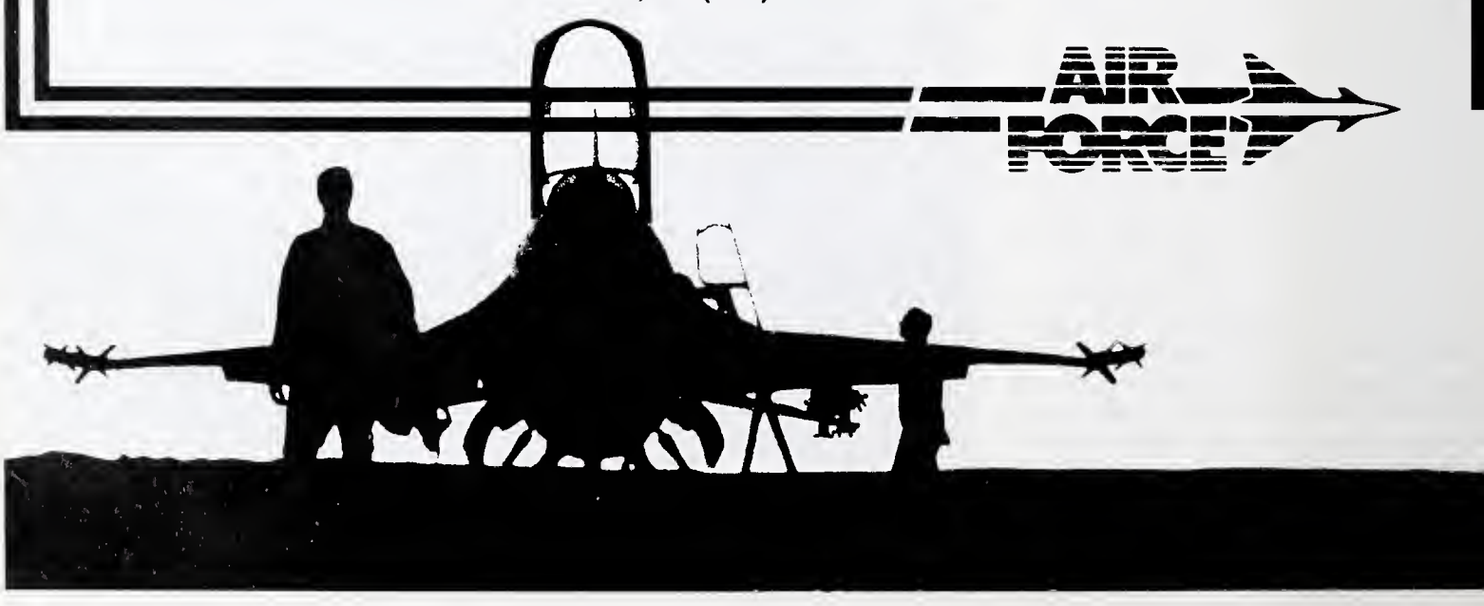
Join the Air Force medical team. Concentrate on your medical practice. Leave the paperwork hassle to others. We use the group practice system of health care. It allows maximum patient/physician contact with a minimum of administrative responsibilities.

You'll get to use those skills you've gained through the years of education; to stay up with new methods and techniques; and, if qualified, to specialize.

Our superior employment and benefits package make Air Force medicine an attractive alternative to private practice. Find out how you can be a part of the Air Force health care team. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 784-3132 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE



TMA members to support 1987 and future tort reform activities.

The board approved and referred to the Council on Legislation a recommendation that TMA support legislation that calls for an honor system of reporting participation in continuing medical education as a condition of relicensure. The recommendation, which came from the Council on Medical Education, stipulates that the legislation should allow three acceptable standards: the American Medical Association's Physician Recognition Award; the American Osteopathic Association Award for CME, or equivalent hours; American Board certification or recertification within the three-year period; or specialty society CME requirements with a minimum of 150 hours in a three-year period. Physicians against whom a complaint or liability suit has been filed would also be subject to audit. Finally, the legislation should permit the use of a simple check-off list on relicensure forms to report obtained CME hours. The check-off list would be made up of the allowable forms of CME, and written documentation should be required only if a licensee is audited or if a complaint has been filed against the licensee.

The Executive Board approved a recommendation from the Council on Legislation that TMA support the creation of a new medical director's position in the Texas Department of Mental Health and Mental Retardation, and discontinue support of the statutory requirement that the commissioner of TDMHMR be a physician.

The council's report noted that proposals from the Sunset Commission, TDMHMR, and the Texas Society of Psychiatric Physicians would repeal the requirement. The board approved the council's recommendation that TMA support a staffing plan that would "provide for medical leadership at the highest levels in the department by creating a medical director in the office of the commissioner, who must be a physician. The medical director is responsible for the quality and appropriateness of clinical services by: (1) developing policies, subject to approval by the commissioner, over all clinical services regulated by the department or delivered in department facilities or under contract; (2) directing a physician recruitment and retention program; and (3) directing specified internal monitoring function over quality and appropriateness, including programs for utilization review, standards and quality assurance, and peer review."

Noting that the 1987 TMA operating budget provides virtually no margin of income over expense for activities supporting tort reform, the Board of Trustees proposed a $100 voluntary contribution solicitation program of all TMA members. The Executive Board unanimously approved the proposal. Funds solicited will support TMA efforts during 1987 and in future years to achieve legislative and judicial reforms that will ease the medical professional liability crisis in Texas.

House continues study of medical discipline bill

At press time, the Texas House of Representatives Committee on Public Health was continuing its study of HB 283, relating to the improvement of the state's Medical Practice Act. The bill would provide absolute immunity for good faith peer review activities and allow physicians involved in the good faith peer review effort to recover their attorneys' fees and court costs in a retaliatory suit. The proposed legislation also states that any final and substantive disciplinary action by a peer review entity must be reported to the State Board of Medical Examiners for possible investigation.

Following a public hearing Monday, Feb 23, 1987, Rep Brad Wright (R-Houston), the public health committee chairman, referred the bill to a subcommittee chaired by Rep Jack Harris (R-Pearland).

James R. Winn, MD, Uvalde, a family physician and former member of the Texas State Board of Medical Examiners, appeared at the hearing to speak on behalf of Texas Medical Association, which favors the legislation. Dr Winn assured the committee, "We want incompetent physicians out of the practice of medicine." He added, when physicians are sued after they report improper practices, "The message is loud and clear: Do not get involved." The proposed law's protections against liability "will help negate the chilling effect of those lawsuits," Dr Winn said.

Also appearing in support of the legislation was the bill's sponsor, Rep Mike McKinney, MD, (D-Centerville), and a representative of the Texas Nurses Association, who asked that the legislation's immunity for reporting be extended to other health professionals.

During the hearing, the House committee members raised questions regarding the membership of peer review committees and whether they should have lay members. They also discussed the possibility of a legal requirement that physicians report improper practices. There was some concern among committee members that the bill's proposed method of raising funds for the operation of the State Board of Medical Examiners, which would rely on licensure fees, is unfeasible.

In addition to Representatives Wright and Harris, the members of the Committee on Public Health are Representatives Billy Clemons (D-Pollok), vice-chairman, Frank Madla (D-San Antonio), Nancy McDonald (D-El Paso), Alan Schoolcraft (R-San Antonio), Ron Givens (R-Lubbock), Talmadge Heflin (R-Houston), and Ciro D. Rodriguez (D-San Antonio).

Improved discipline necessary for public faith, Edwards says

Failure to improve Texas' medical discipline will cause the public to lose faith in a wonderful profession, Texas Sen Chet Edwards (D-Duncanville) told his audience at Texas Medical Association's 1987 Winter Conference.

Senator Edwards participated in a panel discussion of "Tort, Court, and Insurance Reform—The 1987 Legislature's View of the Liability Crisis." Joining him in the discussion were Rep Mike Toomey (R-Houston) and the Honorable Robert W. Calvert, Austin, former Chief Justice of the Texas Supreme Court.

The senator noted that other problems will ensue without improvement of the medical discipline system. The public will be inadequately protected, he said. He also speculated that the state attorney general's office might review medical discipline cases, a development that he termed a "drastic measure. . . . Medical discipline should not be a political football," Senator Edwards said.

He closed by observing that proposed legislation that would require mandatory

reporting of significant actions of peer review committees and provide protection for physicians who report misconduct "would go a long way in protecting the public and your profession."

Representative Toomey spoke about "The Case for Tort Reform . . . What Physicians Must Do to Win." He advised his listeners to support an amendment to the state constitution that will assure that tort reforms do not conflict with the requirement regarding equal access to the courts. Without the amendment, proposed reforms to the tort system will be vulnerable to being declared unconstitutional.

He also encouraged the audience to participate in a grassroots effort. He predicted that tort reforms will win approval by a narrow margin. "That means you can have a tremendous impact on those final votes," he reminded.

Former Chief Justice Calvert presented "The Case for Judicial Merit Selection . . . Getting Politics Out of Our Courts." He noted that the state's judges are elected for reasons that are not related to a candidate's qualifications. These factors include name identification, position on the ballot, political party affiliation, and, finally, "big bucks."

Mr Calvert spoke in favor of a merit selection plan that allows for intermittent "retention elections," in which judges are retained or voted out of office. Through this plan, Mr Calvert said, "We'd get rid of politics. We'd get rid of buying offices." A merit selection system will contribute significantly to the success of tort reforms that the legislature is considering, Mr Calvert concluded.

WALKER A. LEA, JR, MD, a Waco physician, was named a Distinguished Alumnus for 1987 by Baylor University. During his medical career, Dr Lea has been affiliated with Providence and Hillcrest Hospitals in Waco, the Brazos Psychiatric Center in Waco, and Scott and White Hospital in Temple.

GERALD P. BODEY, MD, has been named chairman of the department of medical specialties at The University of Texas M.D. Anderson Hospital and Tumor Institute. The newly renamed department includes several services—cardiology, infectious diseases, endocrinology, pulmonary medicine, and rehabilitation—that deal with patient problems unrelated to cancer.

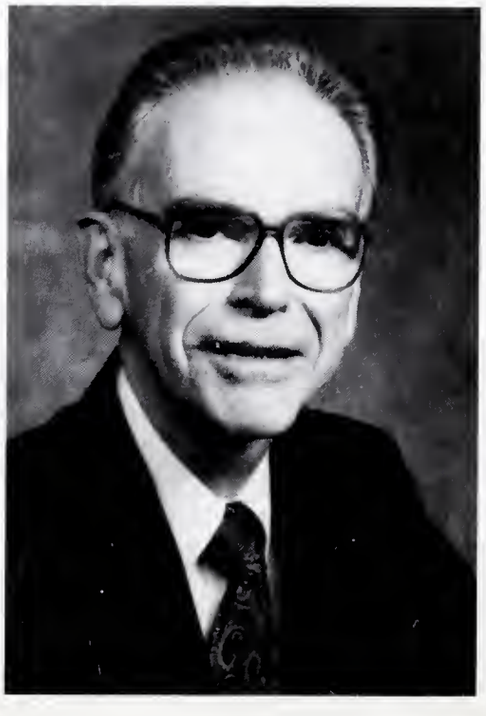
W.D. THAMES, MD, a Lufkin family physician, was given the Angelina Award by Champion International Corporation and the Angelina County Chamber of Commerce. Dr Thames, who began his medical practice in Lufkin in June 1947, was honored for his lifetime commitment and service to the community.

JORDAN U. GUTTERMAN, MD, Houston, has been appointed to the Virginia H. Cockrell Professorship at UT M.D. Anderson Hospital and Tumor Institute. The appointment coincides with his promotion to chairman of the department of clinical immunology and biological therapy. Dr Gutterman has been a member of the M.D. Anderson Hospital staff since 1971. Before that, he was chief of the hematology-oncology service for Brooke General Hospital at Fort Sam Houston, Texas.

BARRY L. BOWSER, MD, medical director of the Pediatric Program at The Institute for Rehabilitation and Research in Houston, has been named to the National Advisory Committee on Infant and Early Childhood Developmental Programs, National Commission on Accreditation of Rehabilitation Facilities. A specialist in pediatrics and in physical medicine and rehabilitation, Dr Bowser is an assistant professor in the departments of physical medicine and rehabilitation medicine at Baylor College of Medicine. He is a medical consultant to the Center for Developmental Pediatrics at Texas Children's Hospital, the Children's Center for Developmental Therapy, and the Division of Special Services for Handicapped Children, Harris County Department of Education.

Three Houston physicians have received research grants from the Gulf Coast Regional Blood Center for studies related to the scientific, medical-technical, and administrative aspects of blood banking. KIM M. FEHIR, MD, PhD, received a grant to support her work, "Human Cadaveric Bone Marrow for Intravenous Infusion: Collection and Processing, Stem Cell Quantitation, and Cryopreservation." Dr Fehir is assistant professor of medi-

Walker A. Lea, Jr, MD



Barry L. Bowser, MD

cine and director of the bone marrow transplant program at Baylor College of Medicine at The Methodist Hospital.

F. BLAINE HOLLINGER, MD, received a grant renewal to continue his work on the "Interaction Between HTLV-III and HBV in HTLV-III Infected Humans and Effectiveness of HTLV-III Antibody Screening Among Blood Donors." Dr Hollinger is professor of medicine, virology, and epidemiology; director, GI immunodiagnostic laboratory; and chief, hepatitis unit at Baylor College of Medicine, Houston.

DONALD M. MARCUS, MD, professor of medicine, microbiology, and immunology, and chief of the section on rheumatic diseases at Baylor College of Medicine, received a grant to continue his research into the "Immunochemistry of the Lutheran Blood Group System.

TERRY TOWNSEND, Austin, has been selected president/chief executive officer of the Texas Hospital Association (THA). Before joining THA, Mr Townsend was chairman of the board and CEO of Lamar Financial Corporation/Lamar Savings Association. He served 20 years as president and staff CEO of the Texas Motor Transportation Association.

MARGIE B. PESCHEL, MD, Fort Worth, was named recipient of the George T. Caldwell Award by the Texas Society of Pathologists. Dr Peschel, medical director of the Carter Blood Center in Fort Worth, is a past president of the Tarrant County Medical Society and currently serves as secretary of the Texas Medical Association. The Caldwell Award is presented annually to a distinguished medical scientist in Texas whose long and distinguished service to pathology warrants commendation.

JAMES K. PEDEN, MD, Dallas, received the 1987 Max Cole Leadership Award from the Dallas County Medical Society. Dr Peden was honored for his leadership in medicine. He is a past president of the Dallas County Medical Society. Currently he serves as a delegate to the American Medical Association House of Delegates. He has been a member of the Texas State Board of Medical Examiners and served as president of the board. In the Dallas community, Dr Peden has served as a member of the Professional Advisory Committee of the Dallas County Mental Health and Mental Retardation Center and has worked with the Texas Area 5 Health Systems Agency, the Dallas Mental Health Association, the Adult Probation Department, and the American Cancer Society.

THOMAS N. JAMES, MD, has been named president of The University of Texas Medical Branch at Galveston. Dr James will succed WILLIAM C. LEVIN, MD, who is retiring in August after 12 years as president. Dr James has taught at the University of Alabama School of Medicine at Birmingham since 1968.

JOHN P. McGOVERN, MD, Houston, has received the 1986 Distinguished Alumnus Award of Alpha Epsilon Delta, the national premedical honor society. Dr McGovern, a past president of the American College of Allergists, is the founder of the McGovern Allergy Clinic in Houston, and holds faculty appointments at Baylor College of Medicine and The University of Texas Health Science Center at Houston.

1 800 252-7003 **(In Austin, call 479-7894)**

Get current information on health and medical legislation before the Texas Legislature. The brief recorded message is updated each weekday at 10 am.

A service of the Texas Medical Association Communication Department, in cooperation with the Division of Public Affairs.

The American Academy of Cosmetic Surgery
in conjunction with
The American Society of Lipo-Suction Surgery *presents*

REGIONAL LIPO-SUCTION SURGERY WORKSHOPS

Mid-Western
APRIL 10, 11, 12, 1987
Detroit, Michigan

Southeastern
MAY 15, 16, 17, 1987
New Orleans, Louisiana

Announcing Lipo-Suction workshops designed to instruct multi-surgical specialists in the latest techniques of Fat-Sculpturing taught by the world's leading American Lipo-Suction surgeons.

FACULTY CO-CHAIRMEN

Richard L. Dolsky, M.D.
Chairman, Plastic & Reconstructive Surgery Section
American Society of Lipo-Suction Surgery

Michael V. Elam, M.D.
Chairman, Advisory Board
American Society of Lipo-Suction Surgery

FACULTY

JOSEPH AGRIS, M.D., Houston, TX
J. MICHAEL BESTLER, M.D., Martinsville, VA
RICHARD L. DOLSKY, M.D., Philadelphia, PA
MICHAEL V. ELAM, M.D., Newport Beach, CA
MICHAEL S. ELLIS, M.D., New Orleans, LA
GARRY FENNO, M.D., Houston, TX
GORDON C. HAM, M.D., Denver, CO
FRANK MINYARD, M.D., New Orleans, LA
JOSEPH NEMETZ, M.D., Encino, CA
JOSEPH W. STERN, M.D., Southfield, MI
HOWARD TOBIN, M.D., Abilene, TX

Clip & Mail

LIPO-SUCTION WORKSHOP FOR MULTI-SURGIAL SPECIALISTS

Name _____ **Specialty** _____

Address _____ **Phone ( )** _____

_____

Mail to your Designated Workshop

Midwestern: April 10, 11, 12, 1987
Joseph Stern, M.D., *Director*
31410 NW Highway
Farmington Hills, MI 48018
(313) 855-5353
No refunds after March 25th

Southeastern: May 15, 16, 17, 1987
Frank Minyard, M.D., *Director*
201 St. Charles Street
New Orleans, LA 70170
(504) 582-1122
No refunds after May 1st

Course fee is $675 (Residents $475). Make check payable to The American Academy of Cosmetic Surgery/Lipo-Suction Society and mail your chosen workshop address above. (Midwestern or Southeastern).

Hotel and Workshop information to be sent upon receipt of registration fee.

Physician Broadcasters and Spokespeople

Mark your Calendars for the American Medical Association's Seventh Annual Speakers Training/Health Reporting Conference!

Featuring Radio-TV Reporting and Spokesperson Training
Annenberg Center for Health Sciences
Rancho Mirage, California
June 4-7, 1987

Pfizer
LABORATORIES
DIVISION

REGISTER NOW. CALL COLLECT (312) 645-5102.

Develop and polish your on-air, speaking and presentation skills at the Seventh Annual AMA Health Reporting Conference sponsored by Pfizer Laboratories. The conference offers an opportunity to meet other physician broadcasters and work with top professionals in broadcasting, media and speakers training.

Category 1 CME Credit/21 Hours

You will select workshops from one of five tracks.

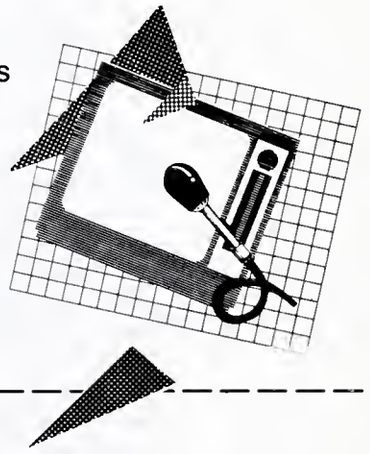
A Track–Open Mike/Speakers Bureau, working with the media
B Track–Beginning to Broadcast/For new medical reporters (1 year's experience)
C Track–Up and Running/Skills enhancement for regular reporters (2 or more year's experience)
D Track–Becoming a Pro/Advanced sessions for more experienced physician broadcasters
E Track–Speaking on Behalf of.../Skills and issues for pharmaceutical spokespeople

PROGRAM SCHEDULE:

Thursday, June 4
Optional Seminar (C & D only)
Professional Meeting
Welcome Reception

Friday & Saturday, June 5 & 6
Workshops, Lunch, Fireside Chats
8:00 a.m.-6:00 p.m.

Sunday, June 7
Workshops



For more information call collect (312) 645-5102
Register early. Class size is limited and enrollment will be on a first-come, first-served basis. Registration deadline is May 1.

(tear off registration information at bottom):

American Medical Association
SPEAKERS TRAINING/HEALTH REPORTING CONFERENCE
Featuring Radio-TV Reporting and Spokesperson Training

Fees are the same as 1986:
$590 AMA members, $750 non-members, $200 students/residents
$200 optional professional day
Fee includes reception, meals, workshops and materials.

Enclosed please find my check for $_____ payable to the American Medical Association, 535 N. Dearborn, Chicago, IL 60610.

_____ I will _____ I will not attend the reception on June 4, 1987.

Name (please print) _____

Address _____

City _____ State _____ Zip Code _____

Phone # ( ) _____

Are you currently on radio? _____ Television? _____

If so, for how long? _____ mos. _____ years

Station call letters/city/network affiliation _____

Accommodations: Marriott's Rancho Las Palmas, Palm Springs, CA

Room Rates: $65.00/Double, Single

Conference: Annenberg Center for Health Sciences, Palm Springs, CA

Hotel Reservation cards will be sent to you when we receive your registration fee.

Please make reservations by May 1, 1987. Reservations received after that date are subject to availability.

LINDA E. LLOYD, MSW, MBA

MARY LAUDERDALE, MA

THOMAS G. BETZ, MD

Motorcycle deaths and injuries in Texas: helmets make a difference

Linda E. Lloyd, MSW, MBA, Bureau of Epidemiology, Texas Department of Health; Mary Lauderdale, MA, Statistical Services, Texas Department of Public Safety; and Thomas G. Betz, MD, Bureau of Communicable Diseases, Texas Department of Health. Send reprint requests to Ms Lloyd, Bureau of Epidemiology, Texas Department of Health, 1100 W 49th St, Austin, TX 78756.

Many Texans consider the motorcycle to be an economical and exciting form of transportation. Since 1970, the number of registered motorcycles in Texas has more than doubled, while the number of registered passenger vehicles has increased by only 50%. Since the repeal of the motorcycle helmet law in 1977, motorcycle deaths and injuries have increased dramatically. This major public health problem is documented using statewide data. In addition, hospital data are used to compare the hospital experiences of helmeted and unhelmeted motorcyclists. This analysis shows that unhelmeted riders averaged twice as many days in the hospital. The average hospital charge for unhelmeted cyclists was nearly 2½ times greater than for helmeted cyclists. Forty-one percent of the unhelmeted cyclists, compared to 27% of the helmeted cyclists, had no hospital insurance.

Many Texans consider the motorcycle to be an economical and exciting form of transportation. Since 1970, the number of registered motorcycles in Texas has more than doubled, while the number of registered passenger vehicles has increased by only 50%. Unfortunately, motorcycle death and injury rates have kept pace with motorcycle sales. In 1970, 116 motorcyclists were killed and 6,000 were injured. In 1985, 364 motorcyclists were killed and over 10,000 were injured. Since 1975, more than 3,500 motorcyclists have died and 111,000 have been injured on Texas roadways. Because of the magnitude and characteristics of human damage, motorcycle crashes are a serious public health problem. In Texas in 1985, motorcycles were involved in less than 3% of all motor vehicle crashes, but their riders represented 11% of the fatalities. Only 3% of all registered vehicles are motorcycles, yet motorcycles account for 10% of the motor vehicle death rate in Texas. Furthermore, only 6% of all licensed drivers are licensed to operate a motorcycle, and a significant number of these do not own or routinely operate a motorcycle.

Helmets are effective in preventing or reducing head injuries. Data from several states show that the head injury rate of motorcyclists without helmets is between two and three times greater than the head injury rates of helmeted riders. Nonhelmeted motorcyclists who die in a crash have a head injury rate between three and nine times greater than for riders wearing helmets (1). Despite the proven effectiveness of motorcycle helmet laws in reducing death and injuries to motorcyclists, more than half the states in the US repealed their mandatory helmet usage law when the threat of loss of highway funds was removed in 1976. Since Aug 29, 1977, Texas motorcyclists 18 years and older have not had to wear protective headgear. Several surveys have shown that laws requiring helmet use by a limited segment of motorcyclists have limited impact on overall as well as age-specific usage (1). The repeals of the motorcycle helmet laws have been tragic decisions. This report uses data from two sources to document the dramatic increase in motorcycle deaths and injuries that have occurred in Texas since the repeal of the Texas motorcycle helmet law.

Helmet laws can save lives, reduce injuries

The motorcycle fatality rate for the years 1975 through 1985 is shown in Fig 1. Between 1976 (the year immediately preceding the repeal of the mandatory motorcycle helmet law) and 1978 (the year immediately following the repeal) the number of fatalities increased by 73% and the number of injured motorcyclists increased by 20%. During the same time period, there was a 20% decrease in the number of registered motorcycles. If Texas is similar to other states, these increases are most likely due to the repeal of the motorcycle helmet law. A US Department of Transportation study reported that 14 states that repealed their helmet laws in 1977 experienced a 41% increase in fatalities. In contrast, the number of deaths increased by only 21% in the states that retained the law (2). Prior to 1977, the motorcycle death rate per 10,000 registered cycles was fairly stable. For the years 1972 through 1976 there were approximately seven deaths per 10,000 registered motorcycles. In 1978—the first full year that motorcyclists were allowed to ride without a helmet—the rate doubled from the baseline period (1972–1976). The rate now appears to have stabilized. Yearly since 1979, Texas has had approximately 12 deaths for every 10,000 registered motorcycles. This rate is 70% higher than the average rate of the baseline years. The injury rate for motorcyclists during the years 1975 through 1985 is shown in Fig 2. Between 1972 and 1976, the motorcycle injury rate per 10,000 motorcycles was declining. Between 1976 and 1978, the number of injured cyclists increased by 20% and the rate more than doubled. Since 1979, the rate has been relatively stable. There are now approximately 340 reported injuries per 10,000 registered motorcycles.

Motorcycle helmet usage as a function of law

Several surveys have shown that motorcyclists do not voluntarily wear a helmet. In 1982, motorcycle helmet usage was observed at 32 different locations in Houston and Dallas. Voluntary helmet usage ranged from 30% to 66% in Dallas and from 17% to 72% in Houston (3). In contrast, several studies have shown that helmet usage exceeded 90% in states that had mandatory helmet laws: Utah 92%, South Dakota 99%, and Colorado 99%. Morbidity

This article has been named a recipient of the Harriet Cunningham Citation for Meritorious Scientific Writing. The award, named in memory of a longtime managing editor of *Texas Medicine*, recognizes review articles of exceptional scientific quality published in the journal.

and mortality data for Texas support the conclusion that mandatory helmet laws induce motorcyclists to wear helmets and thereby reduce deaths and injuries. Fig 3 shows that the proportion of motorcyclists wearing a helmet decreases as the motorcycle fatality rate increases. Prior to the repeal of the helmet law in 1977, over 90% of the motorcycle casualties wore a helmet. Since 1977, the percentage of casualties wearing a helmet has ranged from a high of 26% in 1978 to a low of 20% in 1982.

Well designed helmets not only absorb energy upon impact but they also distribute the impact over the skull and over a longer period of time. Protective headgear can significantly decrease head injury deaths and disabilities. Nationwide, the repeal of the helmet laws has resulted in an increase in motorcyclist deaths resulting from head injuries and triggered a shift toward a smaller proportion of minor injuries and somewhat larger proportion of life-threatening injuries.

Fatal and nonfatal head injuries in Texas increased substantially in the two-year period following the repeal of the helmet law. The number of fatalities in the post-repeal years increased by 73% compared to pre-repeal years. Fatal head injuries increased by 137%, and the nonfatal head injuries increased by 90% over the same period.

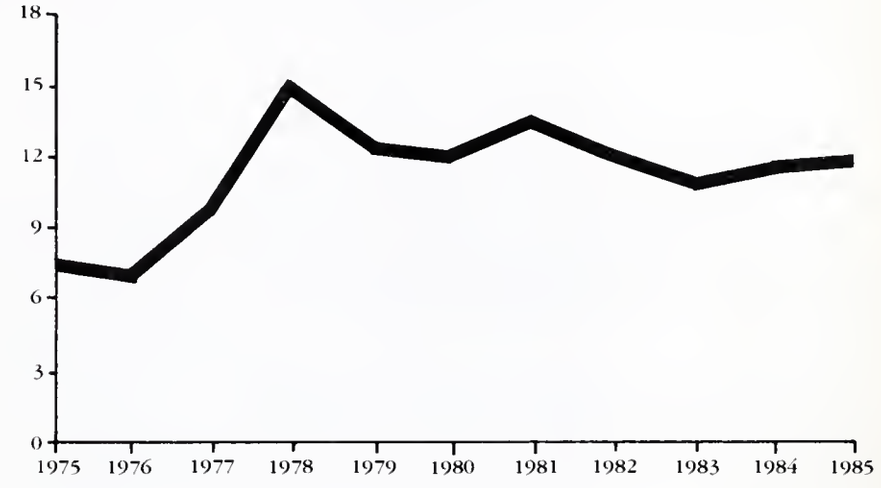
The picture is worse for the unhelmeted motorcyclist

Through its trauma registry, Brackenridge Hospital in Austin, Tex, collects data on all patients having at least a moderate injury (more than 90% were admitted). During the first year of the registry (February 1985 through January 1986), data were collected on more than 1,400 patients who had at least a moderate injury.

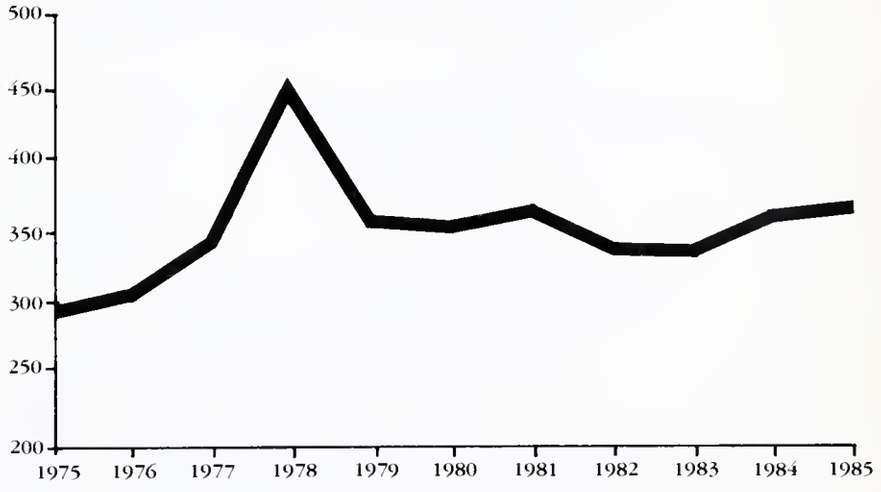
To measure severity of injury, the Hospital Trauma Index was used (4). This injury severity scale is described as an index to quantify the degree of anatomic and physiologic injury and to assign each patient an injury severity score. The severity of injury to six body systems is measured with scores ranging from 1 (minor injury) to 5 (critical injury). One body system of this index is the head and nervous system. A score of 1 indicates head trauma but no loss of consciousness; a score of 5 indicates cerebral injury with coma and no response to stimuli for up to 24 hours.

Of these patients, 160 were motorcyclists who received a moderate injury in a motorcycle collision and were treated at Brackenridge. More than 50% of the registry records have been linked with the Texas Department of Public Safety records. Helmet status has been determined for 88 motorcyclists. Of this group, 58 (66%) were not wearing a helmet and 30 (34%) were wearing a helmet at

1. Motorcycle fatalities: Texas 1975–1985 (rate per 10,000 registered cycles).



2. Motorcycle injuries: Texas 1975–1985 (rate per 10,000 registered cycles).



the time of the collision. With two data sets, many variables can be analyzed. Our analyses indicated that: (a) The ages of the two groups were similar (the helmeted cyclist having an average age of 27 years and the unhelmeted cyclist having an average age of 26). (b) Unhelmeted cyclists had a trauma severity index higher than the helmeted cyclist, 26.1 for unhelmeted cyclists and 20.5 helmeted cyclists. The helmeted rider had an average nervous system score of 1.77. The unhelmeted rider had an average nervous system score of 4.27. (c) The injured helmeted rider had an average hospital stay of ten days. The unhelmeted rider had an average hospital stay of 22 days. (d) The average hospital charge for the helmeted cyclist was $7,211. The average hospital charge for the unhelmeted cyclist was $17,155. (e) Twenty-seven percent of the helmeted cyclists compared to 41% of unhelmeted cyclists had no hospital insurance.

A summary of these results is presented in Fig 4. As this comparison suggests, unhelmeted cyclists have more severe injuries, stay in the hospital longer, have higher hospital charges, and potentially cost the taxpayers more money than the helmeted motorcyclist.

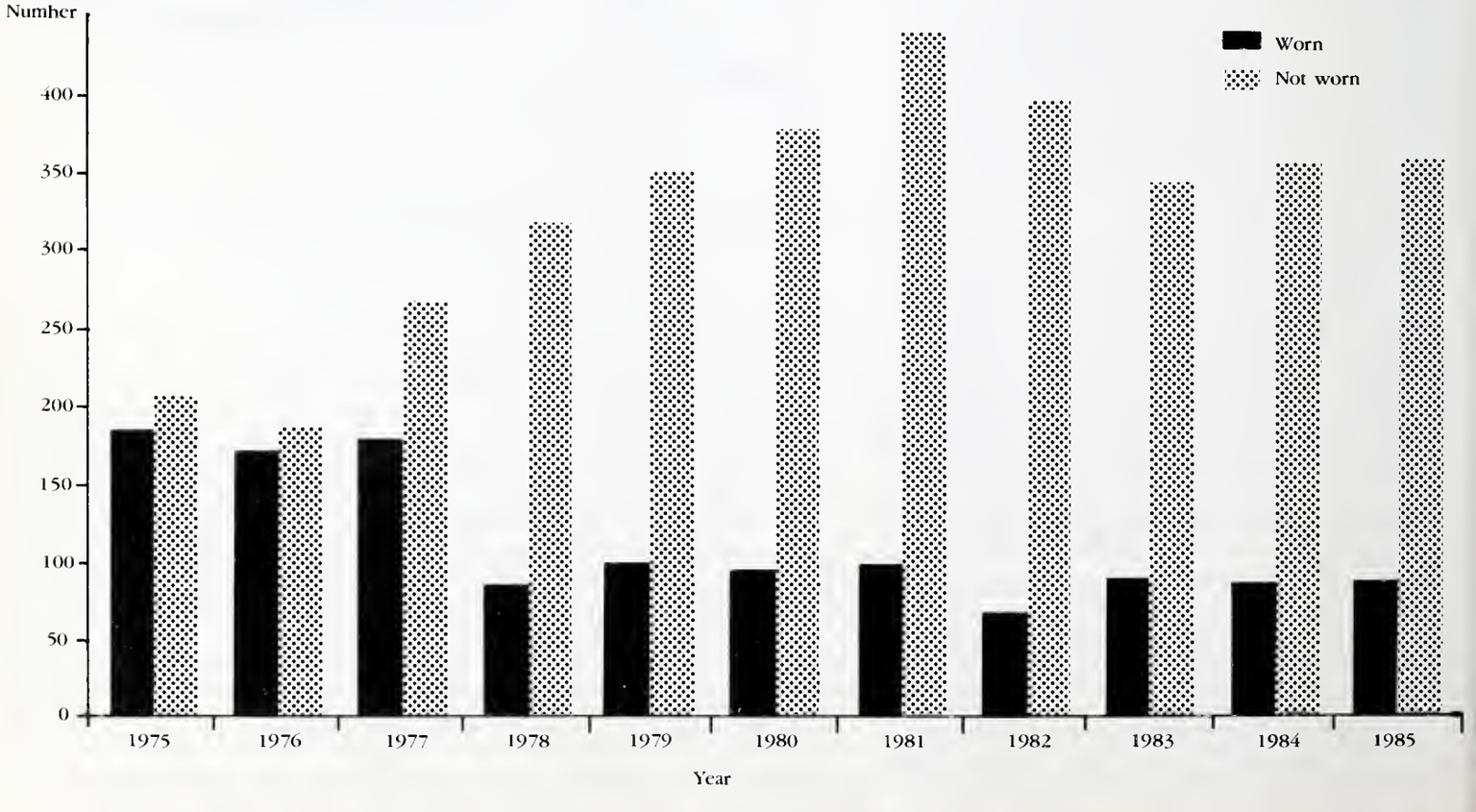
Conclusions

The repeal of the motorcycle helmet law in Texas has been extremely costly in terms of deaths, debilitating injuries, and financial burden. Since the repeal of the law in 1977, more than 1,000 excess motorcyclists deaths have occurred on Texas roadways, claiming Texans who could still be living productive lives had they been wearing a helmet. Also, hundreds more have sustained nonfatal head injuries, many resulting in permanent disability that would not have happened had they been wearing protective headgear. Although the constitutionality of motorcycle helmet laws has been upheld by the highest courts of at least 25 states, the issue of personal freedom is always raised when a mandatory

4. Comparison of helmeted and unhelmeted motorcyclists on selected variables.

	Helmeted Motorcyclist	Unhelmeted Motorcyclist
Trauma index	20.5	26.1
Nervous system score	1.8	4.3
Average length of stay	10.3 days	22.2 days
Average hospital charge	$7,211	$17,155
No health insurance	27%	41%

3. Helmet usage of motorcycle fatalities in Texas: 1975–1985.



helmet law is proposed (5). Attempts to reinstate the legislation have been met with organized protests by motorcycle clubs and groups. Opinion polls that have addressed this issue indicate that most respondents and motorcyclists interviewed have favored the reinstatement of the helmet laws (6). Over the years, the Texas Motorcycle Dealers Association (TMDA) has been neutral regarding mandatory helmet laws. Results of a recent survey indicate that TMDA members wish to abandon this neutral position. A majority (64%) of members indicated that they support a mandatory helmet law (7). The repeal of the helmet laws is a policy that wastes scarce resources and contributes to pain and suffering among motorcyclists and their families. If personal freedom is the issue, then the people of Texas are paying a high price in terms of financial assistance and loss of life and limb.

REFERENCES

1. US Department of Transportation, NHTSA: The Effect of Motorcycle Helmet Usage on Head Injuries, and the Effect of Usage Laws on Helmet Wearing Rates—A Preliminary Report. Washington, DC. January 1979.
2. Scott WE: National Highway Traffic Safety Administration: Memorandum to National Highway Traffic Safety Administrator—Increase in Motorcycle Fatalities, August 1978.
3. Lock J, NJ Hatfield, CH Simpson: Texas Motorcyclists Survey. Motorcycle Safety Foundation, Chadds Ford, Pennsylvania, December 1982.
4. Hospital resources for optimal care of the seriously injured. Bull Am Coll Surg 65:31–33, 1980.
5. Baker SP: On lobbies, liberty and the public good. Am J Pub Health 70:573–575, 1980.
6. Muller A: Evaluation of the costs and benefits of motorcycle helmet laws. Am J Pub Health. 70:586–592, 1980.
7. Texas Motorcycle Dealers Association: Newsletter, March/April, 1986.

HELP YOUR COLLEAGUES HELP THEMSELVES

It's a fact. A shortage of funds can prevent an impaired physician from getting the help he or she needs and wants.

The Physician Health and Rehabilitation Assistance Fund was established by the Texas Medical Association Committee on Physician Health and Rehabilitation primarily to provide assistance to impaired physicians who cannot afford treatment for substance abuse or other problems.

Financial assistance is provided in the form of a loan, with funds usually sent directly to providers of care.

Please help TMA help your colleagues. Support the TMA Physician Health and Rehabilitaton Assistance Fund. Your contribution is tax deductible.

If you would like to know more about how the fund assists indigent, impaired physicians, call TMA at 512/477-6704, ext. 141.

TMA PHYSICIAN HEALTH AND REHABILITATION ASSISTANCE FUND

I want to support the Physician Health and Rehabilitation Assistance Fund. Enclosed is my tax deductible contribution in the amount of:

_____ $25 _____ $100

_____ $50 _____ $ _____

Name _____

Address _____

_____

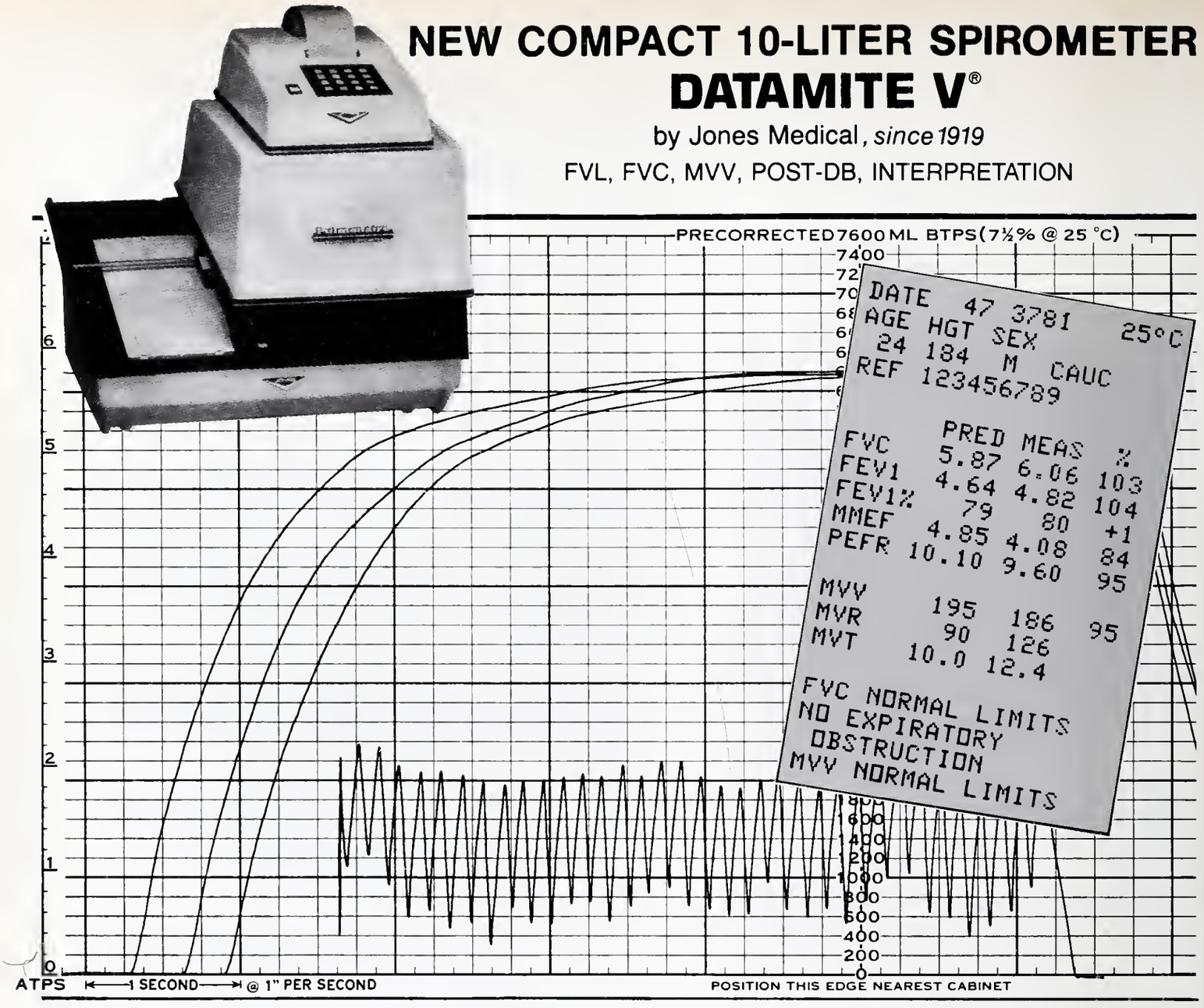
_____

Please return this form to: Texas Medical Association, Physician Health and Rehabilitation Assistance Fund, 1801 North Lamar Blvd., Austin, Texas 78701.

NEW COMPACT 10-LITER SPIROMETER
DATAMITE V®

by Jones Medical, *since 1919*

FVL, FVC, MVV, POST-DB, INTERPRETATION



IN LESS THAN FIVE MINUTES YOU HAVE A COMPLETE, LEGALLY ACCEPTABLE, GRAPHIC AND COMPUTERIZED RECORD

- Easy pour-in, pour-out sterilization
- Volume displacement accuracy
- 5-year bellows warranty
- Easily portable
- Meets ATS, ACCP, NIOSH requirements

FOR OFFICE

- Best test documentation
- Selectable interpretation predicters & parameters
- 35 patient memory option

FOR INDUSTRY

- 200 patient built-in memory option
- OSHA acceptability prompts
- Automatic calibration feature

ONLY **$3,995** LEASE/PURCHASE TERMS AVAILABLE AS LOW AS **$110** PER MO.

FREE DEMONSTRATION IN YOUR OFFICE

Conveniently and immediately available to you from

METRO 654-4700

IN FORT WORTH CALL 817/877-4600

Western Medical Corp.

IN HOUSTON, CALL 713/370-3859

OR CALL TOLL FREE 1/800/323-7336

SAVE UP TO 78% ON STOCK TRANSACTIONS

CHOICE INVESTMENT PRODUCTS GIVE YOU PERSONALIZED DISCOUNT BROKERAGE SERVICE.

We also provide:

- Tax Free Income from Unit Investment Trust, Mutual Funds and Individual Municipal Bonds
- Option Trading with same commission savings
- Mutual Funds to meet all investment needs
- Value Line Reports available at no charge
- IRA's, Pension and Profit Sharing Plans
- Corporate Bonds and Preferred Stock
- Accounts protected by S.I.P.C.

Call Larry Horn at 1-800-222-1537, wait for dial tone and then dial 990650 or call collect 512-371-0003.

Give me a call, we would like to be your personal discount broker.

CHOICE INVESTMENT PRODUCTS - BROKER DEALER
5900 BALCONES, AUSTIN, TEXAS

Psychiatric Hospital Director

Dynamic Texas mental health residential hospital seeks 2 superintendents to direct all psychiatric and substance abuse programming. Must be a physician (Texas license or reciprocity required) with proven proficiency in administration. Specialized psychiatry training and ABPM certification preferred. Annual $71,068 salary consists of $61,068 base plus $4,000 for board certification and up to $6,000 for recruitment and retention. Housing plus utilities provided (Big Spring); annual $2,100 housing allowance provided (Vernon). Excellent fringe benefits.

OR

Non-physician, with a master's degree from accredited college/university in hospital administration, business administration or related field and 8 years proven administrative experience, including 5 years in the mental health field. Annual salary for a non-physician is $49,848, plus housing and utilities or annual housing allowance. Excellent fringe benefits.

Submit detailed resume, a minimum of three professional reference letters and evidence of educational attainment to:

Duwaine Robinson,
Director of Employment Services

Texas Department of Mental Health and Mental Retardation
P.O. Box 12668
Austin, TX 78711-2668
(512) 454-3761

EO/AAE

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

TERRY J. DuBOSE, BA, ARDMS
EDWARD POOLE, MD
WALTER HENNIGAN, MD
LARRY HILL, MD
ROBERT ASKEW, MD
BRUCE HURT, MD

Thyroid sonography—first choice for diagnosis?

Terry J. DuBose, BA, ARDMS; Edward Poole, MD; Walter Hennigan, MD; Larry Hill, MD; Robert Askew, MD; Bruce Hurt, MD; all of Austin. Send reprint requests to Mr DuBose, Austin Radiological Association, Bailey Square Medical/Surgical Bldg, 1111 West 34th St, Austin, TX 78705.

Historically the initial diagnostic imaging procedure for a thyroid nodule work-up, following clinical evaluation and palpation, has been the radionuclide scan. This paper presents a case study, discussion, and references as evidence that high-resolution sonography has become the procedure of choice as the first diagnostic evaluation of a thyroid lesion. The case study includes comparative images from radionuclide rectilinear and gamma cameras, computerized tomography, diagnostic sonography, and a photograph of the thyroidectomy specimen.

In 1965 a medical team evaluated a 61-year-old man in Iran following the removal of a nodule from the right posterior part of his neck. The nodule was found to be papillary carcinoma. A rectilinear radionuclide scan of the thyroid appeared to be normal (Fig 1a). The examiners believed that the nodule had come from the thyroid gland, but could not be sure. The patient was then referred to the United States for further evaluation. Following a routine office visit he was referred for another radionuclide thyroid scan. Gamma camera images following the administration of 4 mCi 99mTC Pertechnetate demonstrated no evidence of nodules. The left lobe was felt to be slightly dominant but the thyroid appeared grossly normal (Fig 1b).

Because of his history, he was referred for a computed tomographic (CT) study of the face, neck, and chest. Following bolus injection of contrast and during contrast infusion, transverse axial views were made at 1 cm intervals from the base of the frontal sinus to the base of the neck. These views demonstrated some low-density areas centrally and bilaterally in the thyroid lobes as well as one lesion in the upper right pole that appeared to be about 8 mm in diameter (Fig 2). However, there were artifacts created by the shoulders on the cuts low in the neck, and sonography was suggested for a more complete evaluation. The chest CT views were unremarkable.

Diagnostic sonography was performed with an articulated arm B scanner with a 7.5 mHz transducer with a 2–6 cm focus. The entire thyroid was evaluated with both longitudinal and transverse scans. Sonography demonstrated two solid nodules of reduced echogenicity in each lobe of the thyroid (Figs 3a, 3b). The largest nodule (measuring 1.2 cm) was in the upper pole of the right lobe.

Following the diagnostic evaluation, a complete thyroidectomy was performed and the tissue sent for pathological evaluation (Fig 4). Sectioning of the right lobe revealed a firm, yellow-tan nodule within the upper pole which measured up to 1.2 cm. Frozen section technique diagnosis revealed this nodule to be a papillary carcinoma. One other nodule in the mid-right lobe and two nodules in the left lobe were diagnosed by frozen section to be adenomatous nodules.

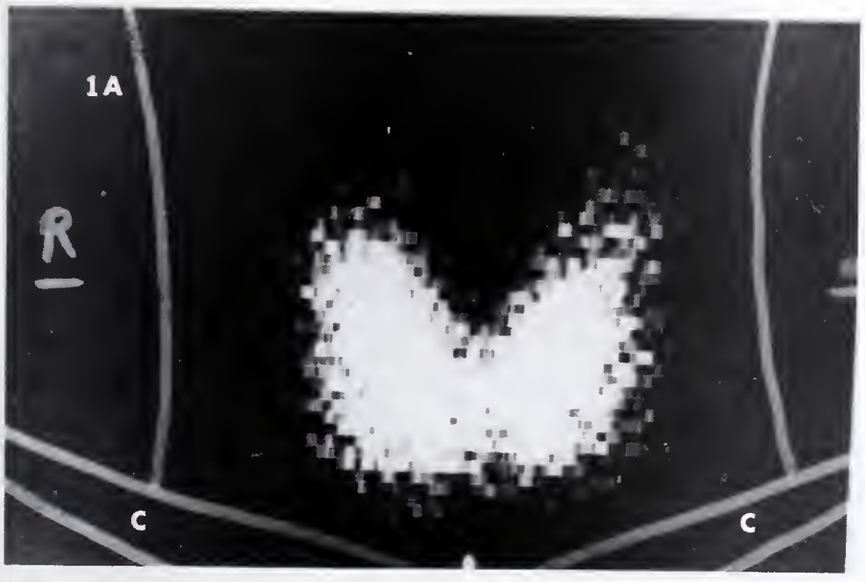
Comment

This case demonstrates some advantages that diagnostic sonography has over other imaging modalities in the evaluation of the thyroid. Radionuclide thyroid imaging usually reveals thyroid lesions; however, it is not specific for the question of whether a mass is cystic or solid (1,2). It is possible, as in the case presented, that if enough normal thyroid tissue lies either in front of or behind the area of interest, the lesion may be obscured from detection. The radiation exposure to the individual must also be considered even though the dose is a small one.

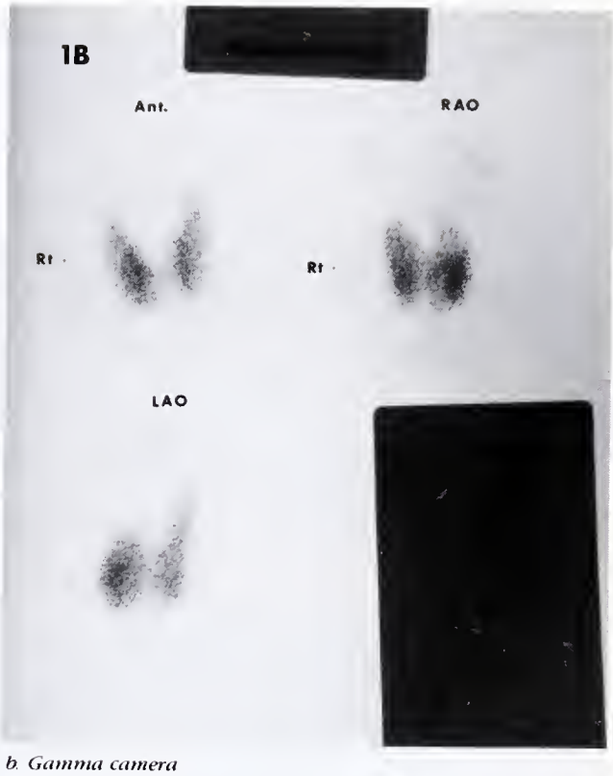
CT can usually demonstrate thyroid lesions and can also differentiate between cysts and solid masses, but usually at a much greater monetary cost. CT also has radiation exposure and the problem of bone artifacts as demonstrated above. Magnetic resonance imaging (MRI) has been effective in evaluating the thyroid without the artifacts or radiation, but currently at an even greater monetary cost than that of CT (1–7).

Diagnostic sonography on the other hand can evaluate the thyroid quickly and without ionizing radiation. The sonographic study can be done for about the same cost as the radionuclide scan but requires less time, provides an indication of tissue texture, is not be confounded by overlying normal tissue, has better resolution, and is noninvasive. We have also had success imaging parathyroid masses with sonography. The newer solid-state phased array real time sonographic machines provide even better images in less time than the B scanner used in this case.

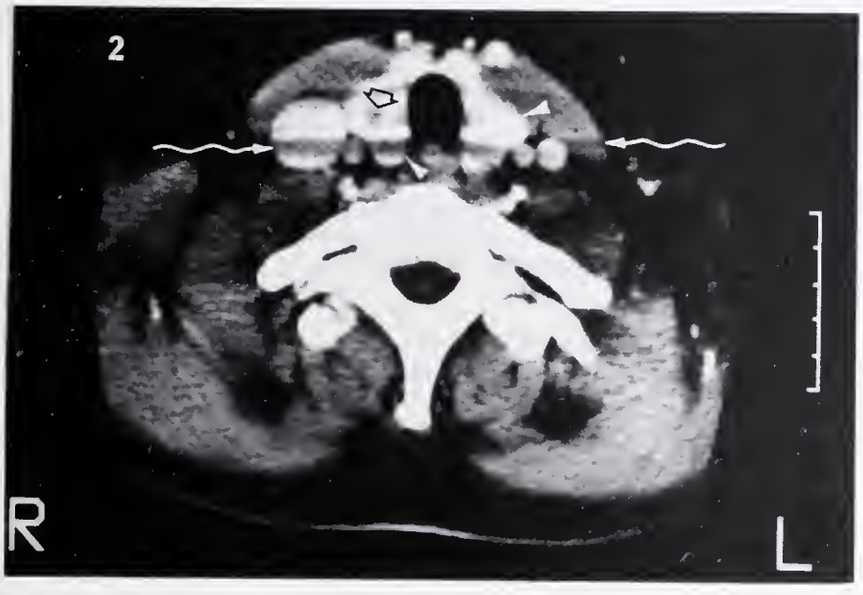
For all of these reasons we agree with the recent conclusion of other authors that diagnostic sonography should now replace radionuclide imaging as the preferred initial evaluation of the thyroid gland. Butch et al (8) reported that "in many centers, sonography has become the procedure of choice for the initial evaluation of the thyroid and parathyroid glands." They also stated that ". . . with a resolution of 4–5 mm, thyroid radionuclide scanning is not adequate to delineate the smaller nodules. Thus, with the superior spatial resolution of small parts sonography, the major use of thyroid scanning [sonographic] has been to identify additional thyroid nodules when only one is palpable clinically." Liu et al stated unequivocally, "The initial radiological examination of the thyroid and parathyroid glands is usually ultrasound." Lupetin made the same recommendation in a more recent article. This conclusion is supported by other publications (1,2,9–12).



1. a. Rectilinear radionuclide scan done in patient's homeland appears normal. R = right side; C = clavicles; dot at bottom center marks the manubrial notch.

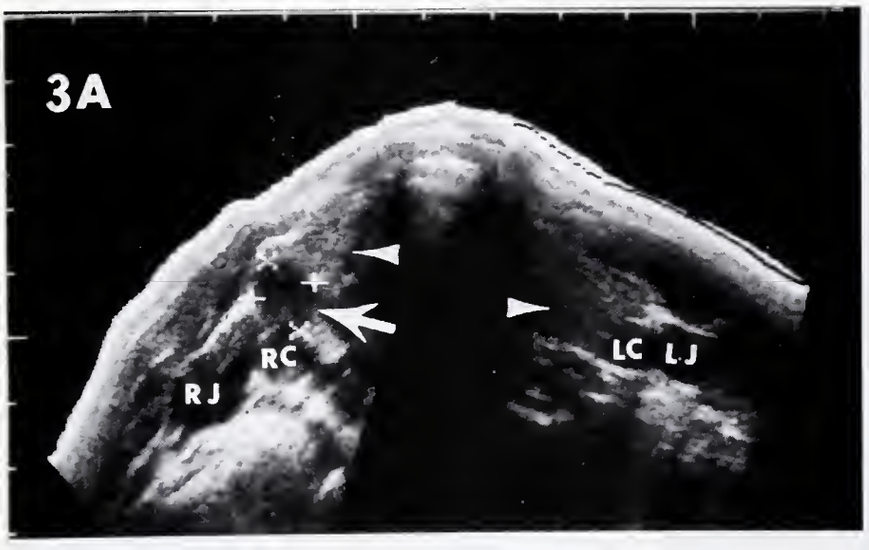


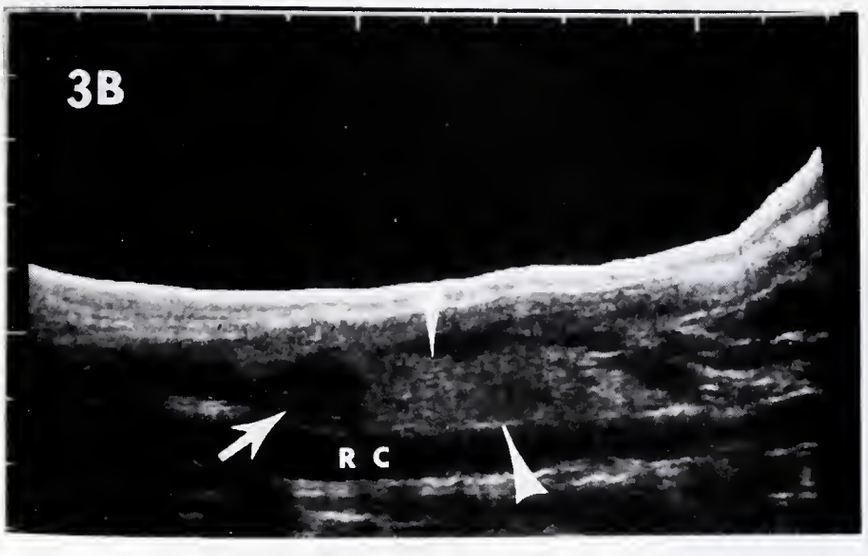
b. Gamma camera radionuclide image. Three views appear grossly normal. Ant = anterior view; RAO = right anterior oblique view; LAO = left anterior oblique view; Rt = right side.



2. CT image shows an adenomatous nodule in the right lobe (open black arrow). Solid white arrowheads = normal thyroid tissue; wavy arrows = bone artifacts.

3. a. Transverse sonographic scan (7.5 mHz) of upper thyroid demonstrating papillary carcinoma (solid white arrow) and normal thyroid tissue (solid white arrowheads). The papillary carcinoma is delineated by electronic calipers, X's = 1.2 cm, +'s = 0.9 cm. Great vessels of the neck are labeled RJ (right jugular), RC (right carotid), LC (left carotid), and LJ (left jugular).





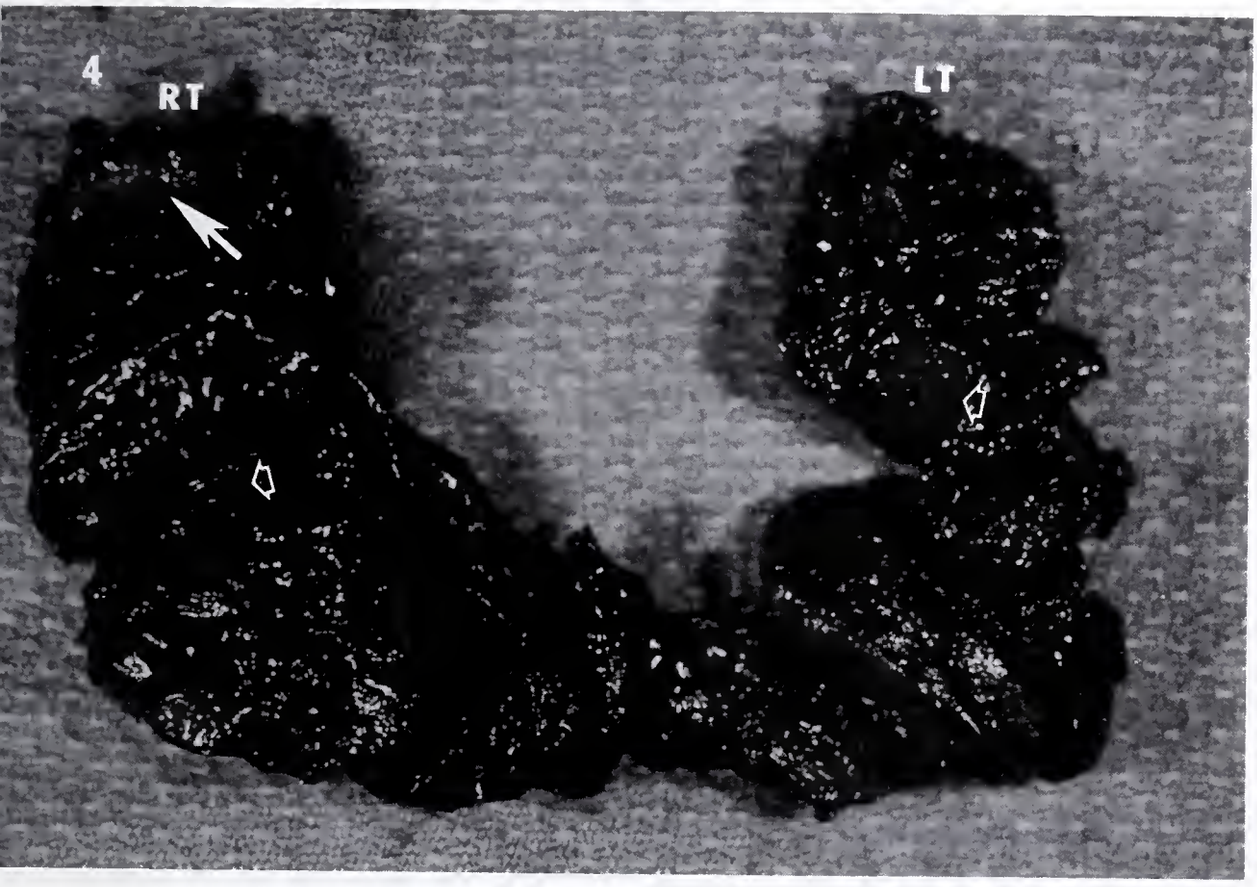
b. Longitudinal sonographic scan of right thyroid showing the papillary nodule (solid white arrow) and normal thyroid tissue (solid white arrow heads). RC = long axis of the right carotid artery.

REFERENCES

1. James EM, Charboneau JW: High-frequency (10 MHz) thyroid ultrasonography, in Howard WR, Zwiebel WJ (eds): Seminars in Ultrasound, CT and MR. Orlando, Fla, Grune & Stratton, Inc, 1985, 6(3):294–309.
2. Cole-Beuglet C, Goldberg BB: New high-resolution ultrasound evaluation of diseases of the thyroid gland. A review article. JAMA 249(21):2941–2944, 1983.
3. Stark DD, Moss AA, Gamsu G, et al: Magnetic resonance imaging of the neck. Part I: Normal anatomy. Radiology 150(2):447–454, 1984.
4. Stark DD, Moss AA, Gamsu G, et al: Magnetic resonance imaging of the neck. Part II: Pathologic findings. Radiology 150(2):455–461, 1984.
5. Gamsu G, Stark DD, Webb WR, et al: Magnetic resonance imaging of benign mediastinal masses. Radiology 151(3):709–713, 1984.
6. de Certaines J, Herry JY, Lancien G, et al: Evaluation of human thyroid tumors by proton nuclear magnetic resonance. J Nucl Med 23(1):48–51, 1982.
7. Liu E, Lufkin R, Hanafee W: Computed tomography of the neck. Postgrad Radiol 5:219–244, 1985.
8. Butch RJ, Simeone JF, Mueller PR: Thyroid and parathyroid ultrasonography, in McGahan JP (ed): Radiologic Clinics North America. Philadelphia, WB Saunders Co, 23(1):57–71, 1985.
9. Lupetin AR: Search begins with ultrasound. Radiology Today 2(6):1, 1985.
10. Radecki PD, Arger PH, Arenson RL, et al: Thyroid imaging: comparison of high-resolution real-time ultrasound and computed tomography. Radiology 153(1): 145–147, 1984.
11. Katz JF, Kane RA, Reyes J, et al: Thyroid nodules: sonographic-pathologic correlation. Radiology 151(3):741–745, 1984.
12. Simeone JF, Daniels GH, Mueller PR, et al: High-resolution real-time sonography of the thyroid. Radiology 145(2):431–435, 1982.
13. Simeone JF, Mueller PR, VanSonnedburg E: Sonography of the thyroid gland, in Leopold G (ed): Ultrasound in Breast and Endocrine Disease. New York, Churchill Livingstone, 1984, pp 83–92.

ACKNOWLEDGMENTS

The authors wish to acknowledge Craig Batten, Pathology Assistant, of Clinical Pathology Labs, Austin, Tex, for his assistance with the specimen photograph; Alice Leggett, ARRT, of Austin Radiological Association, for her assistance with the extra CT images; and Dorthy Sharp, ARRT, also of Austin Radiological Association, for her assistance in obtaining the gamma camera images.



4. Photograph of the total thyroidectomy specimen. Solid white arrow = papillary nodule in upper right pole; open white arrows = adenomatous nodules.

Is your malpractice insurance geared to the past, instead of the future?

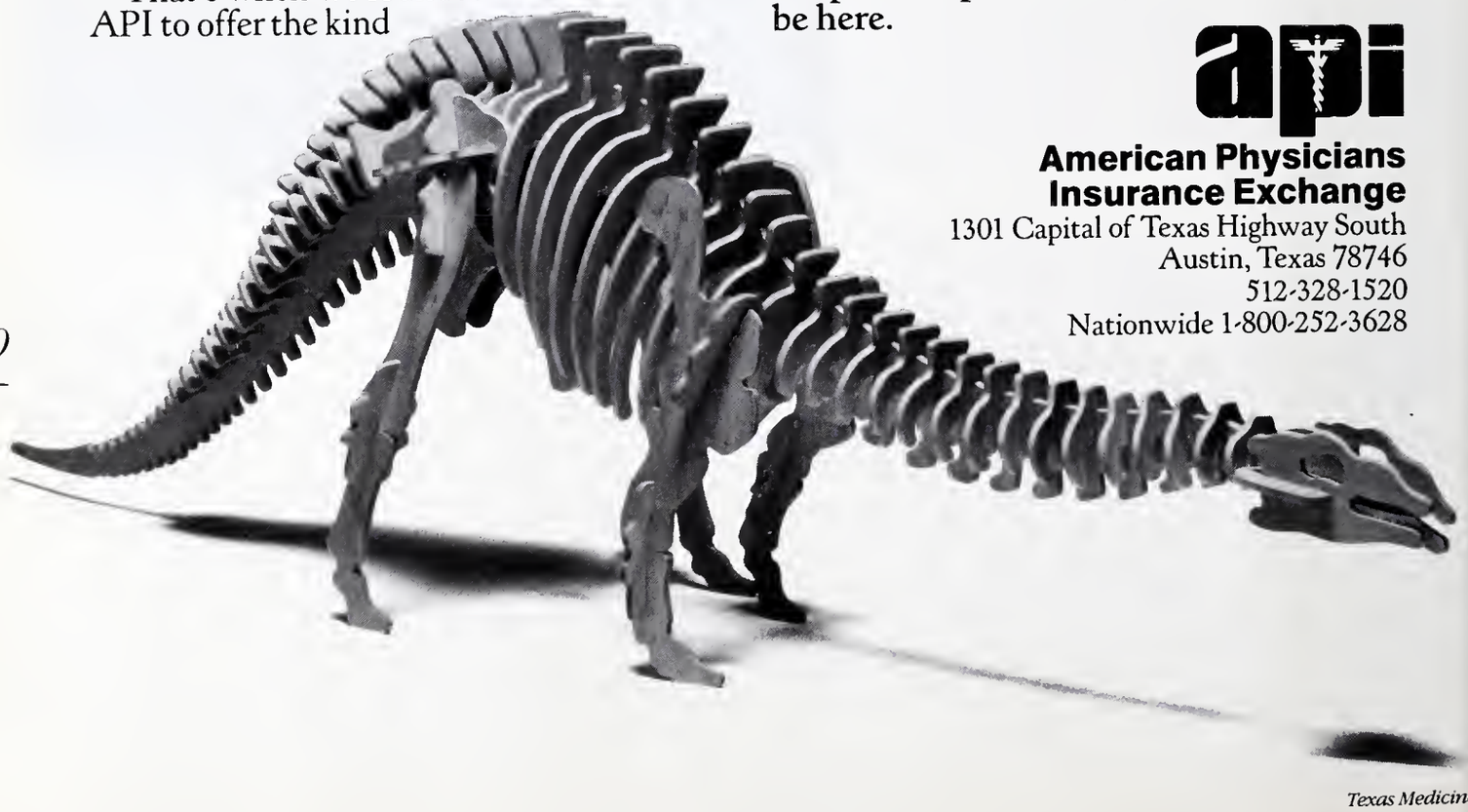
Protecting today's physicians from the onslaught of malpractice litigation is a new game. Back when malpractice lawsuits were rare, old insurance companies sold malpractice policies to just about anyone. Cheap.

Then the malpractice crisis of 1975 appeared—and the new age of malpractice protection arrived. Some of the old insurance companies knee-jerked away from their commitment to Texas and Arkansas physicians.

That's when we founded API to offer the kind of complete protection that the old insurers didn't offer. For all specialties. With ample limits. API plans to offer this complete protection in 1995, 2005 and beyond. Modern, complete insurance coverage must adapt to change. And in malpractice insurance, complete protection is all that counts.

You don't have to settle for less. API guarantees complete protection for today and the future.

When you're ready for complete malpractice protection, call us. We'll be here.



American Physicians Insurance Exchange
1301 Capital of Texas Highway South
Austin, Texas 78746
512-328-1520
Nationwide 1-800-252-3628

LEIF C. BECK, LLB
GEOFFREY T. ANDERS, JD
DOROTHY R. SWEENEY

How your practice can cope with change

Physicians must consider predictions for the future of medical practice if they are to "survive." The environment may involve reductions in fees and demands for services, more strict government regulations, increased competition, and antitrust law complications. The best way for practices to manage in a changing environment is to anticipate the change. Such means as marketing, forming larger groups, developing strategic plans, and instituting effective physician leadership are critical to reaching identified goals. By being alert and managing change, a practice can succeed while still providing the same high quality medical care.

Leif C. Beck, LLB; Geoffrey T. Anders, JD; Dorothy R. Sweeney, all of The Health Care Group, 400 GSB Bldg, One Belmont Ave, Bala Cynwyd, PA 19004. Send reprint requests to Mr Anders.

While so much is written these days about the future of medical practice, many physicians seem to ignore clear indications of change. This may be understandable in view of their clinically and financially rewarding practice situations. After all, who wants to give up a good thing merely because of predictions that things may change? "If it ain't broke, don't fix it," goes a popular saying.

That saying may be fine for a doctor who has worked hard to build a very good practice; he or she can probably ride out the era of change, though quite possibly with declining income, for five to ten years. If, however, the doctor is between age 30 and 50 or cares enough to assure continued practice success indefinitely, the changes in medical practice must be considered and accommodated.

At a recent seminar, one speaker made the following point: *The best way to manage change is to anticipate it.* We consider this statement to be absolutely essential advice for physicians who want their practices to survive indefinitely. Since changes are so obviously under way, and much more change will come, physicians should stay closely attuned to what will probably happen.

General conditions

With this background, here are our views on the direction of medical practice. They are not comforting to doctors who are emotionally or financially committed to the way things have been, but we believe these directions are virtually unalterable.

CAPACITY TO PAY

Perhaps most significant of all is the squeezing of our national capacity to pay for the level of health care that the public has come to expect. The "entitlement" thinking of the 1960s, when the nation seemed wealthy enough to afford all sorts of benefits, has shifted to the 1980s—when our national wealth has levelled off. Health care is buffeted within this much greater economic/sociologic fact, and one cannot assume any solution allowing constant growth.

Thus we have seen the beginnings of approaches designed to limit health care expenditures. DRGs and the recently initiated MAACs (maximum allowable actual charge) are clear examples of such efforts, as is governmental support and encouragement of alternative delivery systems such as HMOs.

Who knows what will be the next, possibly much more permanent, proposed "solution" to the economic squeeze? Perhaps capitation (payment per patient rather than per procedure) will be imposed on doctors' services. Perhaps uniform fee schedules will be imposed by the federal government, and/or by insurers and employers, just as we are already encountering a national schedule of laboratory fees.

We consider one development nearly certain. The fees paid for "noncognitive procedures" will decrease significantly, since virtually all segments of society seem to agree that procedure fees are far too high. Open heart surgery, intraocular lens implantations, cardiac catheterization, and fiberoptic procedures are examples of allegedly overpriced services.

GOVERNMENTAL PRESSURES

While many people predict a continued growth in governmental regulation of private medical practice, we see it a bit differently. We instead expect that government's effort will be toward creating the conditions that will make medicine less rewarding economically. DRGs, fee schedules, HMO support, and "all payers" limits on reimbursement levels are not so much regulation as they are pressures on practice economics.

Regardless of what one calls it, however, government is the "big daddy," directly and indirectly influencing doctors' incomes. There is little hope of effectively curbing that influence by court action, for physicians hardly have a constitutional right to their economic well-being. If government can regulate banks, control natural gas prices and impose laws on corporate takeovers—all of which are understood to be for the public's benefit—it can also affect medical economics.

INCREASING SUPPLY

Like another arm of the pincer, these restrictions on the *demand* for medical services come at a time of tremendous increase in the supply of those services. The number of physicians in practice now is vastly higher than before, and the predictions for 1990 project a still higher number. While doctors tended to dismiss the projections just a couple of years ago, almost all of them now see the continually increasing number of colleagues—or "competitors"—in their specialties.

The pincering effect means that conflict is virtu-

ally inevitable at the physician level. It will probably result in the virtual annihilation of some ancillary medical occupations such as physicians' assistants, respiratory therapy, and the like; doctors may be happy to do the work of those people in view of the available time and the need for income.

RESULTING COMPETITION

These various circumstances certainly show why competition among medical providers is becoming rampant. A shrinking pot invaded by a growing number of fingers virtually pre-ordains such competition no matter how noble the profession may be.

Much of the competition comes from so-called alternate providers. HMOs are developing virtually everywhere; physicians, in town after town, hold discussion sessions to consider how they should cope with actual or rumored HMO incursions. HMOs now have some 20 million patients and are predicted to have 50 million by 1993. That's a lot of patients chopped off private practices' rolls.

The convenience facilities (eg, "urgicenters," and "immediate care centers") are also doing quite well. We know of some practices badly affected by the expanded hours and aggressive marketing that nearby facilities feature. Those new facilities are providing a feature important to consumers these days—convenience.

Hospitals are themselves delving more and more into medical practice even though it may be technically illegal. In their battle to survive, vertical integration of health care services becomes one of their possible salvations. And that integration injects hospitals right into the privately practicing physician's turf.

But physicians' main competition comes from other physicians. Specialty-crossing abounds as doctors seek to provide more services that might maintain their incomes. Advertising is on the rapid rise and will almost inevitably continue to grow. And as "premier groups" contract for bulk patient care (discussed later), the patients gained are lost by other privately practicing doctors.

ANTITRUST LAW—THE BIG LEAGUES

Medicine has entered the business world enough to be the hot topic in antitrust law. Medical staff admission and privileges are vital issues for doctors on both sides—both the "ins" and those who seek to be "in." There are a number of cases that are widely known to lawyers and physicians. These cases involve millions of dollars in legal fees as well as untold potential liability if they are ultimately decided in favor of the plaintiffs involved.

Even though hospitals are codefendants in these various lawsuits, physicians may themselves be at risk. In fact, if their medical staffs may be held liable separately from their hospitals, it is becoming essential to legally separate and incorporate the staffs. Doctors can no longer hide behind their hospitals' skirts.

Antitrust law arises in non-hospital practice situations as well. For example, while we have participated in more group mergers than ever before, some of these joinders touch the ill-defined, and still rather conjectural, antitrust rules as they might apply to health care. And yet antitrust suits are so expensive and, if lost, so economically devastating, that doctors cannot take chances. Physicians are in the "big leagues" of business when those laws are involved.

Our prescriptions

What should the currently successful practicing physician do given this rather bleak description? Except for those who elect to ride their practices out for five or ten years, probably with declining patient volume as they move to retirement, we believe doctors should emphasize the opening key statement: *The best way to manage change is to anticipate it.*

The changed conditions offer opportunities as well as problems. In the airline and steel industries, some companies are suffering and even dropping out while others take advantage of the conditions. We see the same scenarios in medicine, for some practices are growing and prospering despite the conditions. They have adapted to the changed game while still giving the same high quality medical care.

Here are some of the major approaches and basic philosophies we believe are essential for such success.

BUSINESS PLANNING

Doctors tend to resist the idea that hard-headed business planning makes sense in their professional practices. It cannot, however, be disregarded and it cannot be done half-heartedly.

The first part of business planning is to identify the broad goals and how they fit into both present structure and projected financial resources. The goals cannot be all-encompassing, for we find it necessary these days to establish areas of preeminence, even if other areas must be abandoned. For example, internists may have to decide if they are to be primary care doctors or referral specialists; it is becoming harder to be in both camps and prosper in either one.

As to the finally agreed planning document, there must be a reasonable consensus among the practice's players. In a solo practice, at least the manager and key staff members should accept the goals, while all physician-members of a group practice should be comfortable with the major directions. Those who are unwilling to accept and work within the business plan's broad goals should probably not

stay with that doctor or group. Interestingly, business plan goals tend to be self-fulfilling to the extent that people's day-to-day actions reflect those goals.

Secondly, from the broadly stated plan should come *specific strategies* to be followed in order to achieve the goals. What steps should be taken—moving one's office, replacing certain personnel, promoting certain aspects of the practice, or opening a satellite office? And on what timetable?

As an example of this second phase of business planning, we recently followed up on a survey we had performed for a larger group practice six months earlier. The managing partner reported that the group had identified six primary goals and then set out over 60 specific actions to be taken. The likelihood of actually achieving their broadly stated purposes should be distinctly greater with that 60-item action plan in place.

MARKET SHARE

Given the competitive threats and the uncertainties for the next few years, we are urging an emphasis on "market share"—a practice's volume of patients as measured against the total available volume. This is not the time to lose patients, for we expect the next few years to be tolerable mainly for those doctors who have a large market share.

The larger number of patients will enable a practice to keep its income up as well as possible if the fees begin to drop. Market share will certainly permit maximum possible income if the system shifts over to a capitation (payment per patient) basis. And as we see doctors and groups negotiating with hospitals, HMOs, and directly with employers, a larger volume practice should translate to greater negotiating strength.

Therefore, even if a physician must accept a lower fee on some current patient work, the lesser payments may be preferable to losing those patients—to losing "market share." We have therefore generally favored participation in HMOs and PPOs as a means of holding onto patient volume rather than ceding the work to others. We also encouraged participation in Medicare unless the financial circumstances were too adverse; those doctors who elected not to participate now face the risk of adverse publicity and a possible decrease in patients.

MARKETING EMPHASIS

Closely related to the "market share" point, the entire field of marketing has become a key element in one's practice. Marketing is, however, a far broader term than mere public relations and advertising. It involves attention to one's business from the other person's—the consumer's—point of view.

One attribute of successful business corporations is that they are "consumer driven." They focus on anticipating and selling what the consumer *wants and needs*, rather than on selling what they (the sellers) want to sell. Most major new products and services originate this way—from identifying the potential buyer's preferences rather than seller's interests.

But how does being "consumer driven" apply to physicians? As one example, we believe that health care consumers are in large part business employers, labor unions, insurance companies, and the government—not individual patients. These organizations are purchasing most of the health care that physicians provide to patients. The one thing these major purchasers must have is a basically controllable and definable cost structure consistent with quality service.

Unfortunately, physicians have notoriously resisted adapting to this need, equating cost controls and fee restraints with compromises on quality of care. The better approach would be to seek ways to assure the big purchasers about their expense levels while maintaining normal emphasis on quality. If this means that a doctor or group might have to accept less than full fee work in order to serve a larger block of patients, that should be a good step.

Another example involves the "nocturnal market." Goods and services are increasingly being demanded outside the traditional "9 to 5" hours. The banking industry has recognized this characteristic in a unique way, establishing automated teller machines that make bank services available 24 hours a day, seven days a week. Physicians, however, are only now beginning to shift to evening and weekend office hours. Not being consumer driven, private practitioners have preferred office hours that suited their busy lives, and until recently they had been able to call the tune.

GROUP PRACTICE

Unfortunately, we do not see solo practice as the way to cope with change over the long run. We have in fact predicted that there will be significantly fewer solo and even small group (two to five doctors) practices about ten years from now.

The trend toward larger practices, both single and multispecialty, is already apparent. Groups can better allocate physician time to early mornings, late evenings, weekends, and holidays than can a physician practicing alone; one physician simply cannot be available all the time, but a ten-doctor group can easily provide convenience center hours.

The larger group can also spend more meaningful dollars. It can afford to hire a high-salaried administrator with an MBA degree to help steer it through complex contract negotiations. It can purchase state-of-the-art medical equipment to keep it on the cutting edge of its specialty. And it can maintain a large enough public relations/advertising budget to bring in additional patients, while solo practices

spending small amounts may be unable to dent the ad market.

We expect groups to increase in size from three to six doctors up to 10 and 15 members over just the next few years. But all the practices in a service area cannot grow. In fact, the opportunities to establish the described advantages will probably arise just once in each specialty in each community. Once a group has done so, there will probably not be room for its competitors to adapt.

PHYSICIAN LEADERSHIP

One factor in practice management never changes. Whether solo practice or group (large or small), there must be effective leadership at the physician level. Success emanates from a doctor-owner's ability to set the proper tone for the entire practice; conversely, we often point out that every failure or weakness can be and probably is the fault of the practice's CEO—its chief executive officer, or the doctor in charge.

For the sole practitioner, he or she must first identify the practice's characteristics and assure that everyone concerned will conform to them. This CEO-physician must create a consistent atmosphere so the lay staff will act according to the selected goals. Planning and strategy are useless if the doctor-leader cannot, or will not, cause all concerned to act consistently with the business plan.

We find that group practices, even if just two or three doctors, require a strong and capable leadership format to accomplish what is within reach. The most desirable structure includes a single CEO. In some practices, however, where no single physician-member fits the CEO slot, a different leadership model may be necessary. This will usually be a two- or three-doctor "executive committee" specifically authorized to act as though those two or three people were, together, an individual in charge.

Businesses do not survive these days without good leadership, and medical practice is becoming more like other businesses. Doctors wishing to adapt to the changing health care scene need a leadership format—usually a CEO—in order to cope.

Conclusion

As described, the circumstances for privately practicing physicians are less favorable than any time in the past 20 years. The health care industry is not, however, alone in encountering new, rapidly changing problems. As in other business situations, these problems create opportunities as well as annoyances. Thus we see some doctors making their practices prosper within the parameters of quality patient care by being alert to the circumstances and applying modern management skills to take advantage of them.

These successful practices seem to live by a minor variation in the previously stated theme: The best way to manage in a changing environment is to anticipate and face head-on the change.

SUSAN M. COX, MD
J. EDGAR BOST, MD
SEBASTIAN FARO, MD, PHD
ROBERT J. CARPENTER, MD

Epidural anesthesia during labor and the incidence of forceps delivery

We reviewed the records for 1,114 vaginal deliveries at a large teaching hospital to assess the relationship of epidural anesthesia to mode of vaginal delivery, length of second stage of labor, and neonatal outcome. The 1,114 records were divided into two groups representing patients who had received epidural anesthesia and for those who had not. The incidence of forceps delivery in the "epidural group" was seven times that for the group of patients not receiving epidural anesthesia. Only a slightly prolonged second stage of labor was noted in the epidural group. Both groups had favorable neonatal outcomes. We conclude that epidural anesthesia does increase the need for instrument-assisted vaginal deliveries. However, the use of forceps did not cause neonatal depression as evidenced by Apgar scores of 7 or greater at 5 minutes.

Whether epidural anesthesia alters the outcome of second stage of labor remains a controversial issue. Most obstetricians agree that "epidurals" increase the incidence of forceps delivery (1–5). Only an occasional report demonstrates no change or only a slight increase in the rate of forceps deliveries (6–8). Several reports support the view that epidural anesthesia prolongs the second stage of labor (2,9–11). One study suggests that the first stage of labor may also be prolonged (12).

We conducted a retrospective study to determine the relationship of epidural anesthesia to the method of vaginal delivery and length of second stage labor at a large teaching hospital.

Materials and methods

We reviewed the delivery records of all patients delivering vaginally at Jefferson Davis Hospital in Houston during July 1984. During this time epidural anesthesia was available to all patients who requested pain relief during labor and after adequate informed consent had been obtained. There were 1,377 total deliveries of which 1,118 were vaginal. Of these, 296 patients (26.5%) selected epidural anesthesia during labor. Charts were available for review in 272 (92%) of the epidural patients choosing epidural anesthesia. In the "nonepidural group," 685 charts were reviewed which included deliveries requiring forceps. The scoring system was developed by assigning a value from 0 to 10 based on 30-minute increments from the time the patient was found to be completely dilated.

Patients were prophylactically preloaded with 500 to 700 mL Plasmalyte A before epidural block was begun. Most patients were in active labor (greater than 4 cm) or with premature rupture of membranes at term and undergoing oxytocin (Pitocin) augmentation at the time of epidural placement. Occasionally a patient had the epidural placed before undergoing midforceps rotation. All blocks were performed between L2-L5 level with the patient sitting or in the left lateral position. A test dose of 2 to 3 mL of Marcaine (0.25%) was administered after insertion of the catheter. In the absence of adverse effects, an additional 5 to 8 mL of Marcaine (0.25%) was administered. Then either a continuous pump infusion of 0.125% Marcaine was begun at 10 mL/hr, or the patient received intermittent bolus injections to maintain analgesia. The parturient's blood pressure was monitored every 5 minutes for 20 minutes. Any hypotensive episodes were treated with fluid resuscitation and/or ephedrine. During placement of the epidural anesthesia and during labor, the fetus was electronically monitored using fetal scalp electrodes.

Results

Both groups (epidural and nonepidural) were similar demographically with respect to age, race, gravidity, and parity. Patient ages ranged from 13 to 41 years with a mean age of 20.9 years. The weights and Apgar scores of the infants were similar in each group.

The incidence of epidural anesthesia was 26.5%. The major indications for forcep deliveries were fetal distress, prolonged second stage of labor, transverse arrest, and others including Simpson's forceps for the prematurc infant. In the epidural group, 212 patients (71.6%) delivered unassisted while 68 (23.0%) had outlet forceps and 16 (5.4%) required midforceps rotation to effect delivery (Fig 1). In the nonepidural group of 822 patients, 26 (3.2%) had outlet forceps delivery and 7 (0.9%) required midforcops. The difference between the use of forceps in the epidural versus nonepidural group was significant with $p < 0.005$ (chi-square analysis).

In the epidural group, 61.7% of the primigravidas delivered spontaneously. Thirty-two percent were delivered by outlet forceps while 6.3% required midforcops rotation. In contrast, 78.7% of the multiparous patients delivered spontaneously; 16.5% required outlet forceps and 4.9% midforceps rotation (Fig 2). Therefore, when epidural anesthesia

1. Comparison of delivery modes for patients receiving epidural anesthesia and for those not receiving epidural anesthesia.

	Epidural		Nonepidural	
Mode of Delivery	No. of Patients	(%)	No. of Patients	(%)
Spontaneous	212	(71.6)	789	(95.6)
Oulet forceps	68	(23.0)*	26	(3.2)
Midforceps rotation	16	(5.4)*	7	(0.9)

*p <0.0005.

Susan M. Cox, MD; J. Edgar Bost, MD; Sebastian Faro, MD, PhD; Robert J. Carpenter, MD, Department of Obstetrics and Gynecology, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030. Send reprint requests to Dr Faro.

2. Comparison of modes of delivery for primiparous and multiparous patients in "epidural" and "nonepidural" groups.

	Mode of Delivery in Epidural Group		
	Spontaneous	Outlets	Midforceps
Primiparous	61.7%	32.0% *	6.3% †
Multiparous	78.7%	16.5% *	4.9% †
	Mode of Delivery in Nonepidural Group		
	Spontaneous	Outlets	Midforceps
Primiparous	88.6%	9.0% ‡	2.4% §
Multiparous	98.1%	1.5% ‡	0.4% §

*p .01
†p = Not significant
‡ p 0.0005
§p 0.025

3. Duration score for second stage labor in the patients receiving epidural anesthesia.*

	Spontaneous		Outlets		Midforcep Rotation	
	Epidural Group	Nonepidural Group	Epidural Group	Nonepidural Group	Epidural Group	Nonepidural Group
Primiparous	2.2	0.86	3.03	2.76	5.38	5.6
Multiparous	1.4	0.31	3.00	1.00	5.25	5.5

*Duration score was calculated by adding a score of 1 for each 30-minute period.

4. Indications given for use of outlet forceps.

	Primiparous		Multiparous	
	Epidural Group %	Nonepidural Group %	Epidural Group %	Nonepidural Group %
Fetal distress	43.9	36.8	48.1	57.1
Prolonged second stage	43.9	36.8	33.3	14.3
Other	12.2	26.3	18.5	28.6

5. Neonatal outcome in the epidural group.

	Spontaneous (%)		Outlet (%)		Midforcep Rotation (%)	
Apgar Score	1 min	5 min	1 min	5 min	1 min	5 min
7–10	94.5	98.0	88.2	98.5	88.9	100
4–6	4.0	1.0	8.8	1.5	5.6	0.0
1–3	1.5	0.5	2.9	0.0	5.6	0.0

6. Neonatal outcome in the nonepidural group.

	Spontaneous (%)		Outlet (%)		Midforcep Rotation (%)	
Apgar Score	1 min	5 min	1 min	5 min	1 min	5 min
7–10	92.4	96.2	84	96	85.7	100
4–6	2.9	1.0	12	4	14.3	0.0
1–3	4.8	2.9	4.0	0.0	0.0	0.0

was administered, primigravidas had a significantly higher rate of outlet forceps used than did multiparous patients ($p < 0.01$). There was, however, no significant difference in the incidence of midforceps rotation between the primigravidas and multiparous patients (p = NS).

In contrast, in the nonepidural group, 9.0% primigravida patients were delivered with outlet forceps and 2.4% required midforceps rotation. Only 1.5% of the multiparous patients were delivered using outlet forceps and 0.4% required midforceps (Fig 3). Thus, in the nonepidural group, primagravidas had a significantly higher rate of both outlet ($p < 0.0005$) and midforcep rotation ($p < 0.025$) when compared to multiparous patients.

Mode of delivery was then compared to the length of second stage of labor (Fig 3). There was no significance in the groups studied. However, spontaneous vaginal deliveries in the epidural group had a slightly prolonged second stage of labor when compared to the nonepidural group. Additionally, the primiparous group had a second stage of labor slightly longer than the multiparous groups. In the nonepidural group the only apparent difference observed in the second stage of labor duration score was that multiparous patients delivered by outlet forceps had a shorter second stage. This prompted an investigation into the indications for outlet forceps in each group (Fig 4). Fetal distress was the most common indication in the nonepidural multiparous patient (57.1%). Only 14.3% of the nonepidural multiparous patients had a prolonged second stage of labor. In all the other groups fetal distress and prolonged second stage have very similar percentages.

Neonatal outcome in the epidural versus nonepidural group was quite favorable (Fig 5,6). In the epidural group, four infants were depressed at five minutes. Three patients were delivered spontaneously and one was delivered by outlet forceps. Only five cases of newborn depression (Apgars < 6) at five minutes were noted in the nonepidural group. Four of these were spontaneously delivered and one required outlet forceps. None of the infants delivered by midforceps rotations (total 25 cases) were depressed at five minutes (Apgar < 6).

Discussion

Despite the fact that epidural anesthesia can provide excellent pain relief during the labor period, many obstetricians are reluctant to prescribe its use for several reasons. The most common reason cited is that epidural anesthesia causes a sharp increase in instrument delivery because it interferes with the natural course of the second stage of labor (1–5). Our study further supports this view with an overall increase in forceps delivery from 4.1% in nonepidural patients to 28.4% in the epidural group.

This is a sevenfold increase in forceps deliveries and compares with findings of Hoult et al (4) who reported an instrument delivery rate five times higher in the epidural group. Furthermore, they found malrotation to be three times more common, whereas our study demonstrates a fivefold increase in midforceps rotation. Other investigators such as Studd et al (2) found a 20-fold increase in rotational forceps in their study.

Another area of concern is that second stage of labor is prolonged with epidural anesthesia (2,9–11). Studd et al (2) found the second stage to be 50% longer in primiparous mothers and prolonged 2½ times in multiparous. Schussman et al (9) demonstrated that the second stage doubled in patients with epidurals. In Maresh and coworker's study (10) the second stage was increased by delayed pushing, yet actual pushing time was almost identical at approximately 50 minutes. The study presented here demonstrates a greater than threefold increase in duration of second stage labor in the epidural group (from under 15 minutes in the spontaneously delivered nonepidurals to approximately 50 minutes in the spontaneously delivered epidurals).

In our study, patients receiving epidurals, whether primigravida or multiparous, had a significant increase in forceps-assisted deliveries. However, the use of forceps did not result in fetal depression as noted by a lack of Apgar scores equal to or below 6.

Perhaps as proposed by Studd et al (2), patients with epidurals and continuous fetal monitoring could be managed through the second stage of labor for periods beyond two hours. If there is evidence of fetal distress or transverse arrest of the fetal head then intervention with forceps is warranted.

REFERENCES

1. Walton P, Reynolds F: epidural analgesia and instrumental delivery. Anaesthesia 39(3):218–223, 1984.

2. Studd JW, Crawford JS, Duignan NM, et al: The effect of lumbar epidural analgesia on the rate of cervical dilatation and the outcome of labour of spontaneous onset. Br J Obstet Gynaecol 87(11):1015–1021, 1980.

3. Phillips KC, Thomas TA: Second stage of labour with or without extradural analgesia. Anaesthesia 38(10):972–976, 1983.

4. Hoult IJ, MacLennan AH, Carrie LE: Lumbar epidural analgesia in labour: relation to fetal malposition and instrumental delivery. Br Med J 1(6052):14–16, 1977.

5. Goodfellow CF, Hull MG, Swaab DF, et al: Oxytocin deficiency at delivery with epidural analgesia. Br J Obstet Gynaecol 90(3):214–219, 1983.

6. Potter N, Macdonald RD: Obstetric consequences of epidural analgesia in nulliparous patients. Lancet 1(708):1031–1034, 1971.

7. Bailey PW, Howard FA: Forum. Epidural analgesia and forceps delivery: laying a bogey. Anaesthesia 38(3):282–285, 1983.

8. Rudick V, Niv D, Golan A, et al: Epidural analgesia during labor in 1,200 monitored parturients. Isr J Med Sci 19(1):20–24, 1983.

9. Schussman LC, Woolley RF, Larsen LC, et al: Epidural anesthesia in low-risk obstetrical patients. J Fam Pract 14:851–858, 1982.

10. Maresh M, Choong KH, Beard RW: Delayed pushing with lumbar epidural and analgesia in labour. Br J Obstet Gynaecol 90(7):623–627, 1983.

11. Pearson JF, Davies P: The effect of continuous lumbar epidural analgesia upon fetal acid-base status during the second stage of labour. J Obstet Gynaecol Br Commonw 81(12):975–979, 1974.

12. Wieczorek E, Sobiech KA: Oxytocinase activity in the course of continuous lumbar epidural analgesia. Acta Obstet Gynecol Scand 59(5):421–424, 1980.

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

LINLEY E. WATSON, MD
GUY A. WELLS, MD
EDWIN E. TERRY, MD
TROY H. WILLIAMS, MD
ARGYE HILLIS, PHD

Intracoronary vs intrapulmonary arterial streptokinase infusion for MI

Although streptokinase is approved for use in tients with acute myocardial infarction, it is u certain whether streptokinase is as effective administered by routes other than direct intracoronary infusion. To compare two streptokinase infusion routes using strict angiographic control, 57 patients with acute myocardial infarction were randomly assigned to intracoronary infusion or intrapulmonary infusion by means of Swan-Ganz catheter. Rapid coronary thrombolysis in one hour or less occurred in 61% of patients with intracoronary infusion and in 38% of patients with intrapulmonary artery infusion. Combining our results with those of comparable reports in the literature indicates that the intracoronary route is superior to the intrapulmonary.

Several studies have shown that with early acute myocardial infarction, infusion of streptokinase in the infarct-related artery results in frequent, rapid restoration of blood flow (1–8). Intracoronary thrombolytic therapy requires a hospital with a complete cardiac catheterization facility, which results in delay of therapy. Intravenous (IV) streptokinase can be administered in hospitals without cardiac catheterization facilities, resulting in earlier treatment time. Also, a flow-directed Swan-Ganz catheter can be rapidly inserted by a peripheral vein without catheterization laboratory facilities. Streptokinase infused in the proximal pulmonary arterial tree would have the potential of higher concentration delivered to the coronary arteries than would streptokinase infused in a peripheral vein. A randomized trial compared the efficacy of the intrapulmonary artery and intracoronary streptokinase infusion routes at two dosing levels with the recanalization rates observed by coronary angiography.

Methods

Candidates for entry into this study met the following criteria: age 75 years or younger; duration of chest pain typical for myocardial infarction greater than 30 minutes but less than 4 hours; ECG changes of hyperacute myocardial infarction not relieved with sublingual nitrates or nifedipine; no contraindications to or prior therapy with streptokinase; ability to receive treatment within 4 hours of onset of myocardial infarction. Informed consent was obtained as approved by the institutional review board. No candidate refused entry into the study. Fifty-eight patients were transported directly to the cardiac catheterization laboratory where complete coronary angiography was performed. Following angiography 150 μg of intracoronary nitroglycerin was infused into the infarct-related coronary artery. If the artery remained obstructed after nitrates, the randomization envelope was opened to determine whether the patient would receive intracoronary or intrapulmonary arterial streptokinase infusion.

For the first 25 patients (low-dose group) the streptokinase concentration was 5,000 U/mL ($5 \times 10_6$ U/L) of 5% dextrose with intracoronary artery delivery through the diagnostic catheter with a 10,000-U bolus followed by infusion of 5,000 U/minute or intrapulmonary artery delivery of 250,000 U bolus followed by infusion of 1,000 U/minute. Thus, the 25 low-dose patients received 310,000 U of streptokinase per hour by either route. For the remaining 33 patients (high-dose group) the streptokinase concentration was 25,000 U/mL ($25 \times 10_6$ U/L) of 5% dextrose with the intracoronary delivery rate of 33,333 U per minute for 30 minutes, or the high-dose intrapulmonary (Swan-Ganz) delivery was a 250,000 U bolus followed by infusion of 30,000 U/minute for 25 minutes. Thus, the high-dose patients received 1 million units of streptokinase over 30 minutes by either route. Dosage was not randomized.

For each route of administration, coronary angiography was repeated a minimum of every ten minutes. The infarct-related coronary artery was considered open at the first angiogram that showed complete filling of the coronary artery distal to the previous total obstruction. If streptokinase opened the affected artery, streptokinase infusion and coronary arteriography were continued until all apparent clot was lysed. If the artery remained totally obstructed after one hour of treatment, streptokinase infusion was discontinued and percutaneous transluminal coronary angioplasty was performed. If the patient was stable, a standard 30-degree right anterior oblique left ventricular angiogram was performed. Of the 58 patients, one died from refractory arrhythmias associated with cardiogenic shock ten minutes after start of streptokinase infusion. Analyses of results are based upon the 57 patients who completed therapy.

Statistical analysis

Baseline comparability for the two randomized groups was verified using chi-square tests and Student's t-test. Differences in outcome between treatment groups were evaluated by chi-square tests corrected for continuity. Confidence intervals for proportions were also corrected for continuity. Mantel and Haenszel's (9) method was used to combine results of this study with those of similar studies taken from the literature. P-values of less than 0.05 were considered significant. No adjustment was made for multiple looks at the data. The study was discontinued before the intended sample size without attaining statistical significance. For ethical considerations two interim analyses were performed during the course of the study.

Linley E. Watson, MD, Professor and Director, Division of Cardiology; Edwin E. Terry, MD, Associate Professor and Chief, Section of ICU Cardiology; Troy H. Williams, MD, Professor, Division of Cardiology; and Argye Hillis, PhD, Associate Professor of Statistics, and Chief, Biostatistics Department, Division of Research and Education, Texas A&M University College of Medicine and Scott and White Memorial Hospital; and Guy A. Wells, MD, Lubbock, Tex. Send reprint requests to Dr Watson, 2401 S 31st St, Temple, TX 76508.

2. Streptokinase effect and route of administration.

	Swan Ganz	Intracoronary
Opened	11 (38%)	17 (61%)
Not opened	18	11

Results

As shown in Fig 1, randomization of the route of streptokinase administration resulted in no significant differences between groups with respect to age, infarct location, coronary artery treated, duration of pain before streptokinase infusion, or initial ejection fractions. The onset of severe pain was considered the onset of myocardial infarct. As can be seen in Fig 1, nearly 3½ hours elapsed from the onset of myocardial infarction until streptokinase was administered. Less than one hour of this average time was due to mobilization of the cardiac catheterization laboratory. The remaining 2½ hours of this time was usually due to patients' temporizing before they transported themselves to the emergency room.

As seen in Fig 2 the recanalization rate was 38% for streptokinase administered by the Swan-Ganz route and 61% by the intracoronary route. The 95% confidence limit for the Swan-Ganz route is 19% to 57% and for the intracoronary route 41% to 80%. This difference is not significant ($p = 0.15$).

Increasing the streptokinase dose did not result in a higher rate of opening for either route of administration. For the Swan-Ganz route the rates of opening were 46% (low dose) and 31% (high dose). For the intracoronary route, the corresponding rates were 64% and 59%. The difference between the groups was not statistically significant.

One hour following start of streptokinase infusion, we performed percutaneous transluminal coronary angioplasty for those infarct-related arteries that remained totally closed, had poor distal flow, or showed greater than 90% residual stenosis. Of the 57 patients, 28 had adequate reflow in the infarct-related coronary artery with streptokinase therapy alone, and angioplasty was not performed on these patients. Angioplasty was attempted in the remaining 29 patients, and 21 had successful results for a success rate of 72%. The combination of streptokinase therapy followed by angioplasty on non-opened arteries resulted in successful flow in the infarct-related coronary artery in 49 of 57 patients (86%).

1. Validity of randomization (57 patients).

	Swan Ganz	N	Intracoronary	N
Age	56 ± 10 yrs*	29	57 ± 12 yrs	28
Sex				
Male	24		25	
Female	5		3	
Infarct location				
Anterior	12		12	
Posterior	17		16	
Coronary treated				
RCA	18		13	
LAD	10		12	
LCX	1		3	
Pain duration to streptokinase	3.6 ± 0.9 hrs		3.3 ± 1.0 hrs	
Angio ejection fraction	55.5 ± 11.2	17	61.2 ± 12.9	19

*Age, pain duration, and ejection fraction are given as mean ± one standard deviation.

RCA = right coronary artery; LAD = left anterior descending artery; LCX = left circumflex coronary artery.

Discussion

Three recent studies (10–12) compared IV and intracoronary streptokinase infusion with strict angiographic control (Fig 3). Three recent studies (10–12) compared peripheral (IV) and intracoronary streptokinase infusion with strict angiographic control (Fig 3). The present study is added to Fig 3, considering those patients receiving intrapulmonary artery streptokinase the same as peripheral or IV streptokinase infusion. Despite the fact that the success rates range from 31% to 62% for the IV route and from 61% to 87% for the groups receiving intracoronary administration, all studies are consistent with the pooled success rate of 38% for IV administration and 72% for the intracoronary route (chi-square test for non-homogeneity = 6.7 with 6 df, $p > 0.3$). Methodology specifically designed for combining results of several studies reveals an odds ratio of 4:1 in favor of the intracoronary route ($p < 0.001$) based on the four controlled trials. Three additional studies (13–15) randomly observed the efficacy of intravenous streptokinase with strict angiographic control (Fig 3). The results of the Swan-Ganz route compared to all IV routes listed in Fig 3 are not significantly different ($p > 0.6$).

Only studies with protocol nearly identical to the present study were included in Fig 3 because different protocols could result in different IV and intracoronary opening rates. To be included in Fig 3, a study had to have the following criteria: random, prospective assignment of IV and intracoronary streptokinase routes; comparable history and ECG definition of acute transmural myocardial infarction; pretreatment angiographic documentation of total obstruction of the infarct-related coronary artery; documentation of thrombolytic opening of the infarct-related coronary artery by angiography; observation of thrombolytic effects for one hour before attempts to mechanically open the infarct-related coronary artery.

If consideration is limited to such studies, the reported success rates for streptokinase are within our 95% confidence limits of 19% to 57% for the IV route and 41% to 80% for the intracoronary route. The four comparative trials listed in Fig 3 appear to vary greatly in their findings, but differences between their conclusions are no greater than would be expected to occur randomly among several small studies. The average sample size for the four trials is only 41 patients, which means that the power of the individual analysis is less than 50%. Taken together the studies provide strong support

3. Streptokinase routes for acute myocardial infarction

	Route		P
	Intravenous n (%)	Intracoronary n (%)	IV vs IC
1. Rogers WJ et al (10)	8/26 (31)	19/25 (76)	<0.005
2. Alderman E et al (11)	8/13 (62)	11/15 (73)	(0.8) NS
3. Saltups A et al (12)	4/13 (31)	13/15 (87)	<0.01
4. Present study	11/29 (38)	17/28 (61)	(0.15) NS
5. Spann JF et al (13)	21/43 (49)	—	—
6. TIMI (14)	40/115 (35)	—	—
7. European Coop (15)	34/62 (55)	—	—

for the intracoronary route for total thrombotic occlusions.

On the basis of the results of Figs 2 and 3, there is no advantage of delivering streptokinase via Swan-Ganz catheter compared to a peripheral intravenous site. Therefore, for facilities that do not have cardiac catheterization laboratories, administration of peripheral streptokinase for acute transmural myocardial infarction by peripheral IV is as effective as administration via an intrapulmonary arterial Swan-Ganz catheter.

On the basis of the pooled results, we decided it was inappropriate to continue entry of patients in the present protocol in a hospital facility where intracoronary streptokinase infusion is readily available. Nevertheless, because of the limited number of catheterization laboratories, many patients with acute myocardial infarction may face serious delay for intracoronary therapy. More potent IV agents such as tissue plasminogen activator may obtain comparable opening rates to intracoronary streptokinase (14). Until we understand the risk of the recent "thrombolysed" patient for high-grade residual stenosis, rethrombosis, or reinfarction, it seems prudent to perform coronary arteriography early and to look to definitive measures for the offending arterial disease (16–22).

REFERENCES

1. Maddahi J, Ganz W, Berman D, et al: Intracoronary thrombolysis in evolving myocardial infarction: assessment of myocardial salvage by intracoronary Thallium scintigraphy, abstract. Circulation 64:IV-9, 1981.

2. Shah P, Ganz W, Maddahi J, et al: Intracoronary thrombolysis in early acute myocardial infarction improves biventricular function compared to conventional therapy, abstract. Circulation 64:IV-194, 1981.

3. Blanke H, Karsch KR, Schleuter G, et al: Preservation of R-waves after acute LAD-occlusion by streptokinase reperfusion, abstract. Circulation 64:IV-9, 1981.

4. Rentrop P, Blanke H, Karsch KR, et al: Salvage of jeopardized myocardium by non-surgical reperfusion (NSR) in man, abstract. Am J Cardiol 47:493, 1981.

5. Karsch K, Blanke H, Pichard A, et al: Changes in the degree of stenosis of the infarct vessel following intracoronary streptokinase, abstract. Circulation 64:IV-107, 1981.

6. Reduto LA, Smalling RW, Freund GC, et al: Lysis of coronary artery thrombosis with intracoronary streptokinase in acute myocardial infarction, abstract. Am J Cardiol 47:493, 1981.

7. Rentrop P, Blanke H, Karsch KR, et al: Selective intracoronary thrombolysis in acute myocardial infarction and unstable angina pectoris. Circulation 63(2):307–317, 1981.

8. Ganz W, Buchbinder N, Marcus H, et al: Intracoronary thrombolysis in evolving myocardial infarction. Am Heart J 101(1):4–13, 1981.

9. Mantel N: Chi-square tests with one degree of freedom: extensions of the Mantel-Haenszel procedure. J Am Stat Assoc 58:690–700, 1963.

10. Rogers WJ, Mantle JA, Hood WP Jr, et al: Prospective randomized trial of intravenous and intracoronary streptokinase in acute myocardial infarction. Circulation 68(5):1051–1061, 1983.

11. Alderman EL, Jutzy KR, Berte LE, et al: Randomized comparison of intravenous versus intracoronary streptokinase for myocardial infarction. Am J Cardiol 54(1):14–19, 1984.

12. Saltups A, Boxall J, Ho B, et al: Intracoronary vs intravenous streptokinase in myocardial infarction. J Am Coll Cardiol 3:525, 1984.

13. Spann JF, Sherry S, Carabello BA, et al: Coronary thrombolysis by intravenous streptokinase in acute myocardial infarction: acute and follow-up studies. Am J Cardiol 53(6):655–661, 1984.

14. The thrombolysis in myocardial infarction trial. Phase I findings. TIMI Study Group. N Engl J Med 312(14):932–936, 1985.

15. Verstraete M, Bernard R, Bory M, et al: Randomized trial of intravenous recombinant tissue-type plasminogen activator versus intravenous streptokinase in acute myocardial infarction. Report from the European Cooperative Study Group for Recombinant Tissue-type Plasminogen Activator. Lancet 1(8433):842–847, 1985.

16. Schroder R: Systemic versus intracoronary streptokinase infusion in the treatment of acute myocardial infarction. J Am Coll Cardiol 1(5):1254–1261, 1983.

17. Schroder R, Vohringer H, Linderer T, et al: Follow-up after coronary arterial reperfusion with intravenous streptokinase in relation to residual myocardial infarct artery narrowings. Am J Cardiol 55(4):313–317, 1985.

18. Ferguson DW, Kouba CR, Little MM, et al: Combined intracoronary streptokinase and percutaneous coronary angioplasty for reperfusion of chronic total coronary occlusion. J Am Coll Cardiol 4(4):820–824, 1984.

19. O'Neill WW, Lai PY, Gangadharan V, et al: Preliminary report of randomized, prospective clinical trial of intracoronary streptokinase versus coronary angioplasty therapy of acute myocardial infarction, abstract. J Am Coll Cardiol (Abstract) 5:494, 1985.

20. Harrison DG, Ferguson DW, Collins SM, et al: Rethrombosis after reperfusion with streptokinase: importance of geometry of residual lesions. Circulation 69(5):991–999, 1984.

21. Papapietro SE, MacLean WA, Stanley AW, et al: Percutaneous transluminal coronary angioplasty after intracoronary streptokinase in evolving acute myocardial infarction. Am J Cardiol 55(1):48–53, 1985.

22. Meyer J, Merx W, Schmitz H, et al: Percutaneous transluminal coronary angioplasty immediately after intracoronary streptolysis of transmural myocardial infarction. Circulation 66(5):905–913, 1982.

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL

Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas

27 million Americans can't read a bedtime story to a child.

It's because 27 million adults in this country simply can't read.

Functional illiteracy has reached one out of five Americans. It robs them of even the simplest of human pleasures, like reading a fairy tale to a child.

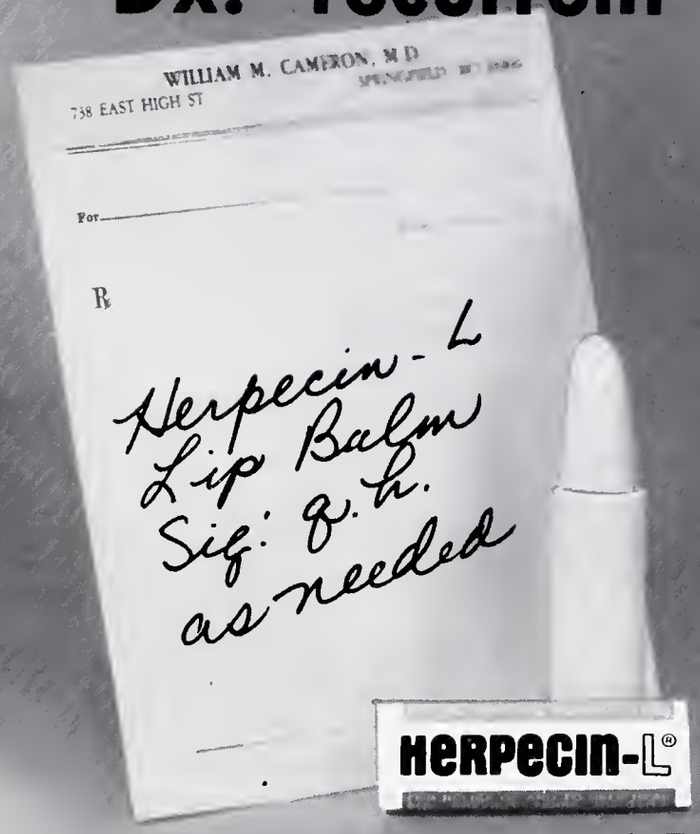
You can change all this by joining the fight against illiteracy.

Call the Coalition for Literacy at toll-free **1-800-228-8813** and volunteer.

Volunteer Against Illiteracy. The only degree you need is a degree of caring.

Ad Council Coalition for Literacy

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

ANTHONY J.
MASTROMARINO, PHD

Colorectal health CHECK: a strategy for prevention

Mortality from colorectal cancer is second only to that from lung cancer in Texas and the United States. At present, less than half the patients with this disease survive five years. In general, five-year survival correlates best with the stage of disease at diagnosis. Hence, early detection is critical if an impact is to be made on this disease. Survey results reinforce the need for public and professional education regarding the availability and benefits of screening tests (eg, digital rectal examination, stool blood test, and proctoscopy). Achieving the goals of the Colorectal Health CHECK Program could potentially save many thousands of lives in the United States each year. To achieve those results, however, physicians must be educated on the value of the screening tests and on the American Cancer Society's colorectal screening guidelines for asymptomatic persons. In addition, physicians—especially primary care physicians throughout Texas—must be motivated to implement routine screening procedures for colorectal cancer and its precursor lesions in the appropriate asymptomatic population.

The three-year program emphasis on colorectal cancer by the American Cancer Society (ACS) was a result of a special ACS national ad hoc committee established in 1982. Their recommendations were based in part on the finding of an attitudinal study that identified several common misconceptions about cancer of the colon and rectum (1). The survey confirmed that adults age 40 years and older do not currently consider the three recommended early detection tests (the digital rectal examination, stool blood test, and proctosigmoidoscopy) a part of their regular health checkup. In fact, the general attitude and practice of physicians (2) with regard to recommending and using these screening tests were appalling, as reflected in Fig 1.

The ACS survey also showed that only 28% of physicians had ever advised their asymptomatic patients to have a stool blood test and only 27% had recommended a proctoscopic examination. The study showed that an expanding public and professional education effort is not only necessary, but that if conducted effectively it could potentially save many thousands of lives.

The ACS embarked on its Colorectal Health CHECK Program for three fundamental reasons: (a) the magnitude of the problem, (b) the public's general misconceptions regarding the disease, and (c) the potential impact of this program on cancer control.

Magnitude of problem

Despite recent advances in the basic sciences and in the detection, diagnosis, and treatment of certain malignancies, the therapy and five-year survival statistics of patients diagnosed with colorectal cancer have not improved significantly over the past several decades.

An estimated 145,000 new cases of colorectal cancer will be diagnosed in the United States in 1987, and 6,700 of those will be in Texas. Moreover, the mortality from colorectal cancer in the United States is estimated to be 60,000 lives, 2,600 in Texas (3). These statistics alone are humbling and command attention. In 1986, only lung cancer occurred more often and claimed more lives in the United States and in Texas. But there are other equally compelling reasons to justify a program emphasis on colorectal cancer.

Misconceptions

The perception the public has of colorectal cancer is alarming (1). The myths and fears expressed in the survey demand that they be addressed.

One commonly held myth is that colorectal cancer occurs more often in men. In fact, colorectal cancer occurs slightly more often among women. Another misconception is that treatment of colorectal cancer usually requires a colostomy. Colostomy is seen as a permanent disability and no distinction is made between temporary and permanent surgical procedures. Moreover, approximately 85% of all patients with rectal cancer and practically all patients with colon cancer require no colostomy, especially when diagnosed at the earlier stages (4).

Many people believe that no prevention methods are available. Whereas this statement is correct in assuming that one cannot currently prevent colorectal cancer, screening and early detection (especially of high-risk groups) can result in early diagnosis and removal of precancerous polyps that are often the beginnings of colorectal cancer (5–7). In addition, several epidemiologic studies, as well as experimental laboratory studies using animals, support the potential preventive role of diet in colorectal cancer (8).

Yet another common belief is that survival rates are low. Many individuals have little confidence in early detection, believing that survival chances are poor whenever this cancer is discovered. People generally recognize that colorectal cancer cannot yet be prevented, but survival rates can be very high, more than 75%, if colorectal cancer is detected at an early stage (9–13). Unfortunately, not more than about 10% of patients are diagnosed with localized colorectal cancer (ie, Dukes' stage A). Finally, detection tests for colorectal cancer often are not considered necessary parts of regular

Anthony J. Mastromarino, PhD, Assistant Vice President for Research, M. D. Anderson Hospital and Tumor Institute, and Chairman, American Cancer Society, Texas Division, Colorectal Task Force. Send reprint requests to Dr Mastromarino, Office of the Vice President for Research, Box 101, The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030.

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

health checkups. Generally, stool blood testing and the proctoscopic examinations are not done, nor is the subject of colorectal cancer detection often discussed with patients. Accurate information must be provided to the public to clarify and correct these misconceptions. This is a major goal of the CHECK program.

Impact on cancer control

The ACS recommends specific guidelines for colorectal screening in asymptomatic individuals (Fig 2) (14). These recommendations are presented in Fig 2 (14).

The guidelines are based on many factors (15), including the fact that perhaps the single most important risk factor is age. About 93% of all colorectal cancers occur in men and women 50 years of age and older. Although there is still considerable debate over the acceptance and implementation of these guidelines (13,16–27) the projected, potential impact on lives saved is dramatic and represents a goal that is challenging, but achievable. The estimated number of lives that could be saved by implementing the CHECK initiative in the United States and in Texas is depicted in Fig 3a and 3b, respectively. Physicians must be convinced that including early detection tests for colorectal cancer and its precursor lesions, as part of the regular health checkup for asymptomatic patients, will save lives. The single most important prognostic factor is the stage of disease at diagnosis (9–13) (Fig 4).

1. The figures indicate the percentage of American adults who had ever had the colorectal screening examinations as of 1983 (column 1) and the percentage of those who had had these examinations in the last two years (column 2).

Colorectal Screening Tests (Age in Years)	% Through 1983	% 1981–1983
Digital rectal examination (over 40)	52	29
Stool blood test (over 50)	19	8
Proctoscopy (over 50)	36	15

2. Colorectal screening guidelines recommended by the American Cancer Society for asymptomatic persons.

Test	Recommendation
Digital rectal examination	Annually beginning at age 40 years
Stool blood test	Annually beginning at age 50 years
Proctosigmoidoscopy	Every 3 to 5 years after two initial negative examinations conducted annually beginning at age 50 years

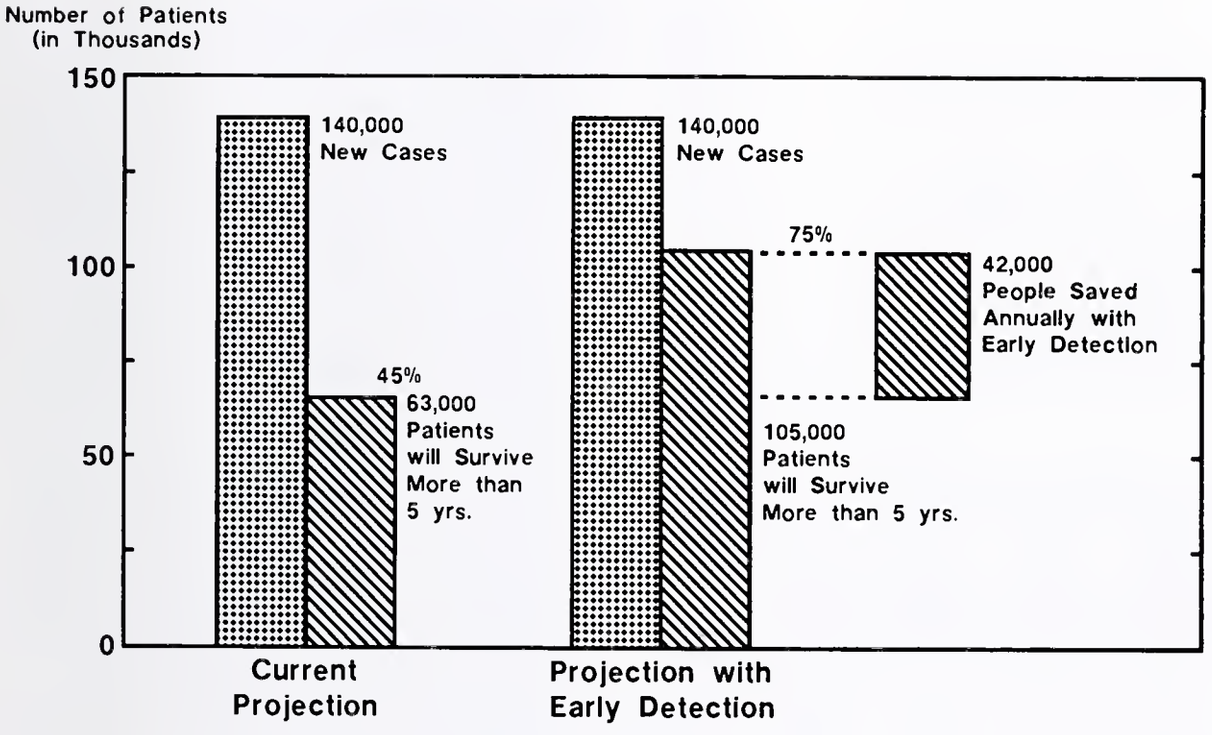
The Colorectal Health CHECK Program

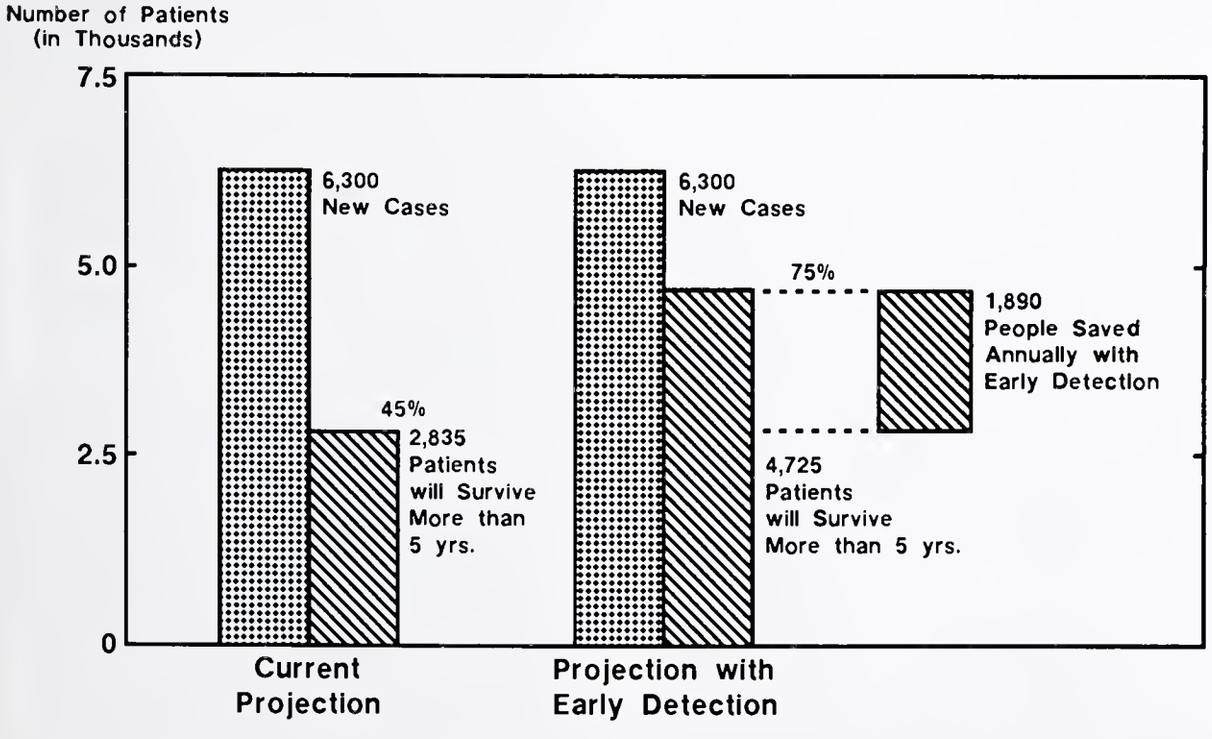
The CHECK program is intended to heighten awareness through an integrated effort involving three principal program areas of the ACS—public education, public information, and professional education. Significant progress has been made nationally but especially throughout Texas in delivering accurate information to the public on risk factors, signs and symptoms, and the colorectal screening tests available. There has been more than a 250% increase in public education programming in our state since the initiation of CHECK. According to ACS records, more than 317,000 adults received information on colorectal cancer in 1984–1985 compared to 90,000 in 1982–1983. The success in Texas has been possible as a result of training more than 600 specialized volunteers, including nurses, health educators, and personnel from allied health fields, to deliver the programs. These efforts are facilitated by the excellent resources available through the ACS. Despite the increased programming, however, the results of a recent follow-up poll conducted by the Gallup Organization for the ACS reaffirms the need for continued program emphasis on colorectal screening and education (28).

The goal of the public information component of CHECK is to provide materials and resources on colorectal cancer to all major media outlets. The program's four major copy points to the public are: promoting an awareness of the three screening tests essential for the early detection of disease in the asymptomatic population, encouraging the target population group 50 years of age and over to be sure to ask their physician about having these tests, conveying the message that at least 75% of all colorectal cancer patients can be cured if the disease is detected in an early stage, and correcting the misconception that the treatment for colorectal cancer necessarily involves a colostomy.

A key to delivering the message to the public is physician involvement, especially in media presentations. Media coverage of demonstration screening projects that have been conducted throughout the state has provided visibility and raised the public's consciousness of the disease and the screening tests available. A variety of materials and resources from the ACS ensures that accurate information is transmitted to the media.

Another goal of CHECK in Texas, as well as nationally, is to reach family practitioners and other primary care physicians in the United States in a group setting or on a one-to-one basis with a continuing medical education program on the doctor's role in the early detection of colorectal cancer. Stated quantitatively, the goal is to increase by 25% the number of family practitioners and other primary care physicians who regularly provide recommended colorectal screening tests to patients 50





3a & 3b. The projected impact of early detection of colorectal cancer on survival and cancer control in the United States (a) and in Texas (b).

4. Five-year survival patterns relative to stage of disease at diagnosis.

Modified Dukes' Classification (11–12)	Description	5-Year Survival Rate
Stage A	Invasion up to the muscularis propria	90%
Stage B1	Invasion into, but not through propria (lymph nodes—negative)	70%–85%
Stage B2	Invasion through the muscularis propria and the serosa (lymph nodes—negative)	60%
Stage C1	Invasion into, but not through the bowel wall (muscularis) with involvement of 4 regional lymph nodes	40%–50%
Stage C2	Invasion through the bowel wall 30–40% (muscularis and serosa) with involvement of 4 regional lymph nodes	30%–40%
Stage D	Distant metastasis (primarily liver)	5%–10%

5. Results of Texas Medical Association survey designed to assess physician practices and attitudes toward colon cancer screening: statewide percentages.

	IM* (128)	GP/FP (1,096)	OB/G (368)	S (355)	U (113)	Other (205)
Do you have a routine office protocol for screening patients for colon cancer?						
Yes	77	68	43	58	15	62
No	23	32	57	42	85	38
Do you routinely use fecal occult blood testing as a screening method for asymptomatic patients?						
Yes	88	77	44	61	13	74
No	12	23	56	39	87	26
If yes, who do you screen by occult blood testing?						
All patients	37	17	10	23	24	32
Only patients over 40 years	42	51	51	41	38	46
Only patients over 50 years	16	18	25	15	19	13
Only patients with a history of bleeding or GI complaints	4	15	14	21	19	8
Do you recommend special dietary precautions to patients when collecting stool for occult blood testing?						
Yes	60	63	47	60	24	66
No	40	37	53	40	76	34
Do you perform digital rectal exams on routine physicals?						
Most patients	94	87	84	90	99	85
Only when patients have symptoms	5	10	12	9	1	7
Rarely	1	3	4	2	0	8
Do you routinely use proctoscopy as a screening method for asymptomatic patients?						
Yes	39	24	3	39	0	40
No	61	76	97	61	100	60
If yes, on which patients do you perform proctoscopy?						
All paticnts	5	4	2	8	0	16
Only patients over 40 years	36	18	10	24	0	27
Only patients over 50 years	25	21	10	15	0	26
Only patients with rectal bleeding or GI complaints	34	57	78	53	100	31

*IM—internal medicine; GP/FP—general practitioner/family physician; OB/G—obstetrician/gynecologist; S—surgeon; U—urologist. The number in parentheses indicates the number of responding physicians by specialty.

years of age and over. The majority of people still look to the physician for advice and direction about health matters. Accordingly, the physician can be the most important motivator for getting people to adopt good health habits. Hence, it is critical that this program emphasis reach physicians and encourage them to comply with and implement the ACS guidelines in recommending and performing these tests for their asymptomatic patients. Many family practitioners and primary care physicians are not currently recommending the three colorectal screening tests for a variety of reasons: they are not convinced of the efficacy of the stool blood test (16,20,24); patients object to the use of the rigid proctosigmoidoscope because it is uncomfortable; few physicians have the flexible instrument for performing proctosigmoidoscopy; and many have not been trained to use the flexible, fiberoptic proctosigmoidoscope. Coupled with the response of physicians in Texas, these concerns only serve to underscore the necessity of continuing medical education and physician training programs (17,23,25,27,29–33) and the importance of understanding the determinants of physician behavior toward cancer screening and prevention (34,35).

It is important, therefore, that family practitioners and other primary care physicians be familiarized with the goals of CHECK and the recommended ACS guidelines for early detection of colorectal cancer (14,25,27,29,32).

TMA survey of physicians

To assess the attitudes and behavior of physicians in Texas, the ACS solicited the support of the Texas Medical Association (TMA). Donald Spencer, MD, Chairman of the TMA Committee on Cancer and member of the ACS Texas Division Colorectal Task Force, agreed to survey the association's membership by questionnaire.

The TMA distributed 8,736 questionnaires statewide, 2,265 of which were returned. A summary of the statewide survey results are presented in Fig 5. Of the physicians responding, 85% of urologists and 57% of obstetricians and gynecologists (OB/G) indicated that they do not have a routine office protocol for screening patients for colon cancer. In contrast, 77% of internists and 68% of general practitioners and family physicians (GP/FP) have a routine office protocol for screening patients for colon cancer. Internists and GP/FPs indicated that they routinely use fecal stool blood testing as a screening method in asymptomatic persons, whereas 87% of the urologists and 56% of the OB/Gs indicated that they do not. Of the physicians who use the stool blood test, the majority in all specialties only screen asymptomatic individuals over age 40; relatively few screen their patients regardless of age. Whereas 76% of urologists and 53% of OB/Gs do not recommend

special dietary precautions to their patients, 63% of GP/FPs and 60% of internists and surgeons do recommend special dietary precautions to their patients when collecting specimens for stool blood testing. More than four out of five physicians in all specialties routinely perform digital rectal examinations as part of the routine physical examination of most patients. However, none of the urologists and only 3% of the OB/Gs routinely use proctoscopy as a screening method in asymptomatic individuals. In fact, only 39% of internists and 39% of surgeons routinely use proctoscopy in screening asymptomatic patients. Clearly, few physicians routinely use this procedure to screen asymptomatic persons, and of those who use it at all, the majority use it only on patients with rectal bleeding or gastrointestinal complaints rather than as a screening procedure.

Results of the TMA survey were also analyzed by specialty for six metropolitan areas. The analysis is based on the response of 975 physicians: 42 from El Paso, 103 from Austin, 159 from San Antonio, 343 from Greater Houston, 227 from Dallas, and 101 from Fort Worth. They represented 43% of the statewide respondents.

In the El Paso area, fewer physicians in any specialty have a routine office protocol for screening patients for colon cancer. Special dietary recommendations are generally made more frequently to patients, but this may be related to the fact that physicians who use the stool blood test do so primarily for patients with complaints rather than for asymptomatic individuals. Physicians, regardless of specialty, nearly always use the digital rectal examination on patients, whereas proctoscopy is not generally recommended, and when it is done, it is done primarily in symptomatic persons.

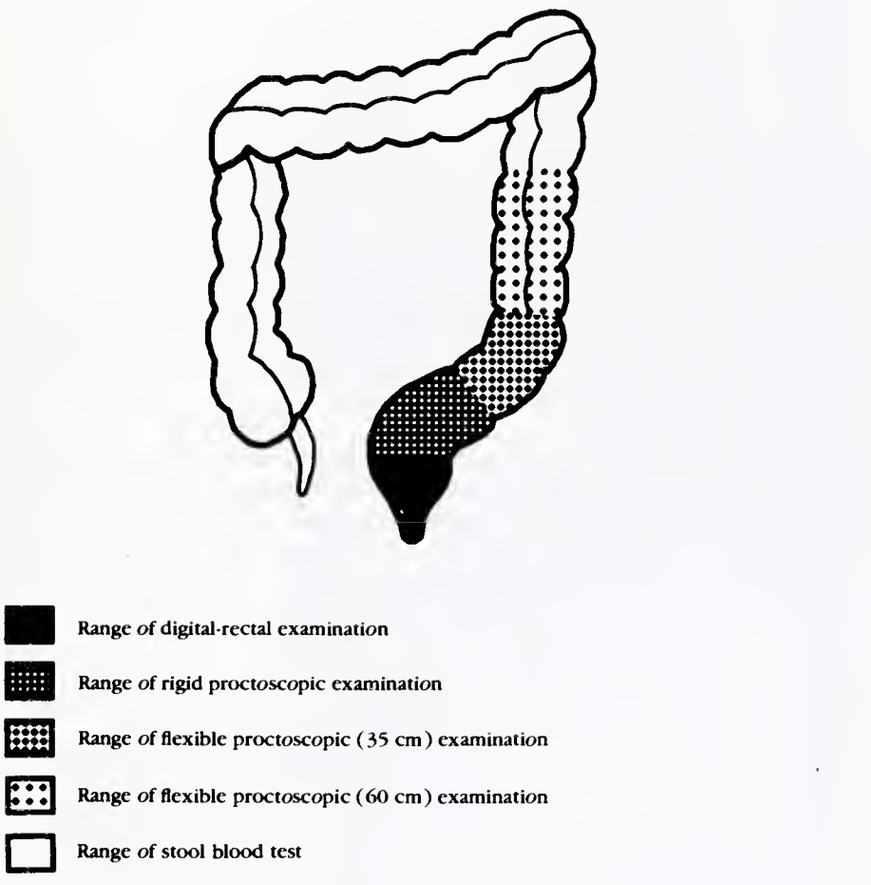
Physicians in the Austin area seemed to be more consistent in their practice of screening for colon cancer, although urologists and OB/Gs still had the lowest percentages of use. Except for urologists, the majority of the responding physicians use the stool blood test in screening asymptomatic persons, particularly in those subjects 40 years of age and older. Of note is that dietary recommendations were generally made to individuals being screened using the stool blood test except by most urologists and OB/Gs. Digital rectal examinations were done on most patients, but proctoscopies were infrequently performed except by surgeons, of whom 69% indicated using this procedure routinely as a screening method in asymptomatic patients. In general, however, when proctoscopy is used, it is performed in symptomatic patients.

In the San Antonio area, fewer OB/G physicians routinely employed a screening procedure for their patients or routinely used the stool blood test compared with the statewide average. Agreeing with overall state results, survey findings from San Antonio showed that urologists used this test infrequently, whereas virtually all of the internists responding used the stool blood test in all of their asymptomatic patients. Except for urologists and OB/Gs, most physicians routinely recommend dietary precautions when collecting specimens for the stool blood test. The digital rectal examination is widely practiced by physicians in the San Antonio area. Only internists and surgeons, however, consistently use proctoscopic examinations, and the majority of these were performed on symptomatic persons. It should be noted that the responding physicians in the San Antonio area appear to use proctoscopy more frequently than do respondents statewide. The results are similar in the Houston, Dallas, and Fort Worth areas.

In general, it is the internists, the GP/FPs, and to a lesser extent, the surgeons, who use the stool blood test routinely in screening asymptomatic persons, using age as the principal criterion for recommending this test. When the stool blood test is recommended, many subjects are not being told to adhere to any special dietary precautions. The digital rectal examination appears to have wide acceptance and practice among physicians of all specialties. Proctoscopy is practiced more frequently by internists and surgeons than any of the other specialties, but is generally limited to those subjects with symptoms.

The survey analysis reflects current practices among the sample of physicians who responded, representing at least five specialty areas. Whether this sample and hence the results and their interpretation is representative of the physicians-at-large in Texas cannot be determined with certainty. The number of questionnaires returned represents a compliance of 26%, and the response of the six major metropolitan areas represents only 43% of all respondents. It is clear from the results that although the ACS guidelines recommend the practice of all three screening tests for asymptomatic persons, the general practice by physicians does not comply closely with these recommendations. Only the digital rectal examination is used consistently. However, the digital rectal examination will only detect approximately 12% of all large bowel tumors, being limited in range to the distal 6 to 7 cm of the large bowel (Fig 6).

The survey points out the need for a major professional educational emphasis and for continuing medical education and training among primary care physicians throughout our state. Opportunities for education and the acquisition of new skills, eg, endoscopy (flexible sigmoidoscopy), are paramount (6,7,17,21,25–27,29–33). Each physician should try to adopt a routine screening policy consistent with the guidelines promulgated by the ACS (Fig 2) while keeping his costs affordable, especially for elderly individuals, who are at increased risk, and


Range of digital-rectal examination
Range of rigid proctoscopic examination
Range of flexible proctoscopic (35 cm) examination
Range of flexible proctoscopic (60 cm) examination
Range of stool blood test

6. The theoretical range and detection capabilities of the three colorectal screening tests are depicted. The digital rectal examination has a limited range, but can detect approximately 10%–12% of large bowel tumors. The range of the proctoscope depends on the type of scope. The 60-cm flexible proctosigmoidoscope can generally be inserted approximately 45 cm and can detect up to 60% of tumors occurring in the large bowel. The 35 cm flexible proctosigmoidoscope can generally be inserted nearly its entire length and has the potential for detecting approximately 50%–55% of large bowel tumors. The rigid proctoscope has a more restricted range, being limited to visualizing about 17 cm of the distal colon. The stool blood test, though not limited to the detection of bleeding in the large bowel, may alert a physician of bleeding anywhere in the large bowel. The tests are complementary and are intended to be used together in the screening of asymptomatic subjects.

receiving a fixed income.

Numerous resources for professional education as well as resources for distribution by physicians to patients are available through the ACS unit offices (Appendix 1). In addition, a special training program on flexible sigmoidoscopy has been organized by Joseph Painter, MD, UT M. D. Anderson Hospital, Office of Extramural Programs. The model program was piloted successfully in Houston and has since been endorsed by the Texas Academy of Family Physicians and the American Cancer Society, Texas Division. The Office of Extramural Programs will have information available on similar programs that will be offered throughout the state to train physicians in the use of proctosigmoidoscopy in screening asymptomatic patients for colon cancer and its precursor lesions.* Use of the short (35 cm) flexible proctosigmoidoscope is generally recommended for general practitioners (36–39).

Conclusion

The goals of the CHECK program are ambitious, but the results can be rewarding. Cooperation and assistance are vital to mounting a successful program. The challenges of education are twofold. The first is cognitive. As professionals and health educators, we must understand the importance of screening and the radical difference early detection makes in disease prognosis. The second and more important aspect of education is affective. We must be persuasive in promoting and motivating individuals to alter their current health practices and attitudes (34,35,40). Ideally, we should be exemplars to the public, not only by using the three recommended tests regularly in routine physicals, but by being screened ourselves. To Confucius is attributed the saying, "The essence of knowledge is having acquired it to apply it." Until we know more about the causes and etiology of colon cancer, primary prevention is difficult if not impossible to achieve (8,32,41). Research is being carried out to address this problem, to identify markers of normal and malignant colonic tissue (42), and, in particular, to identify the role that diet may play in inhibiting colon carcinogenesis. For the present, however, an increased emphasis on secondary prevention through early detection and removal of premalignant conditions is essential (5–7,32). Treatment of early colon cancer by surgery alone is effective, whereas widespread disease has a very poor prognosis (43). With the more widespread use of the three screening tests by physicians, a major impact could be made on the morbidity and mortality from colon cancer throughout the United States and, in particular, in Texas. The deficiencies of the stool blood tests, as critically reviewed by Simon (24),

*See Continuing Education Directory, p 109.

are being addressed with the development of new approaches (44). Despite the current controversies surrounding the use of colorectal screening tests in an asymptomatic population, an ancient Chinese proverb sums up our position eloquently: "If we don't take it upon ourselves to change our direction, we will likely end up in the direction we are headed." Together, we can make a significant difference.

APPENDIX: Educational resources available from the American Cancer Society.

Professional Education*

Publications (self-instruction):

The Evolving Surgical Treatment of Rectum and Colon Cancer (Code 1512)

Colonoscopy and Colon Cancer: Current Clinical Practice (Code 1552)

Current Status of Fecal Occult Blood Testing in Screening of Colorectal Cancer (Code 1529)

Films or Videocassettes (self-instruction and teaching):

Proctosigmoidoscopy in the Physician's Office (Code M105)

Slide Sets (self-instruction and teaching):

Don't Miss Out on Your Sunset Years . . . Together (Code 2101)—a pamphlet for the older black audience, emphasizing the steps men and women can take to help protect themselves against colorectal cancer.

Nutrition, Common Sense and Cancer (Code 910)—a pamphlet detailing the American Cancer Society's nutritional guidelines.

Folder (Code 2108-g)—four-color format with cover picking up poster grid of people entitled, "Colorectal Cancer—Go for Early Detection"; presents up-to-date information on early detection tests with artist's sketch of colon and rectum showing the range of the various tests.

Facts on Colorectal Cancer (Code 821)—an illustrated booklet describing the function of the colon and rectum, risk factors, signs and symptoms, recommended tests for early diagnosis and treatment, and hope for the future.

Ask for Physician (Code 2108-d)—a pocket-size card to aid all adults 50 years and over in talking with their physicians about detection tests for colorectal cancer.

*All of the professional education materials qualify for various categories of Continuing Medical Education (CME) credits.

REFERENCES

1. Cancer of the colon and rectum: summary of a public attitude survey. CA 33(6):359–365, 1983.
2. Survey of physicians' attitudes and practices in early cancer detection. CA 35(4):197–213, 1985.
3. Silverberg E, Lubera J: Cancer statistics, 1987. CA 37:2–19, 1987.
4. Leffall LD Jr: The impact of colon cancer: a clinician's perspective. Cancer Detect Prev 8(3):339–340, 1985.
5. Gilbertsen VA, Nelms JM: The prevention of invasive cancer of the rectum. Cancer 41(3):1137–1139, 1978.
6. Gilbertsen VA, McHugh RB, Schuman LM, et al: Colon cancer control study: an interim report, in Winawer SJ, Schottenfeld D, Sherlock P (eds): Colorectal Cancer: Prevention, Epidemiology, and Screening. New York, Raven Press, Progress in Cancer Research and Therapy, vol 13, pp 261–266, 1980.
7. Winawer SJ, Gottlieb LS, Stewart ET, et al: National polyp study progress report, abstract. Gastrointest Endosc 30(2):147, 1984.
8. Reddy BS: Diet and colon cancer: evidence from human and animal model studies, in Reddy BS, Cohen LA (eds): Diet, Nutrition, and Cancer: A Critical Evaluation. Boca Raton, Fla, CRC Press, vol 1, 1986, pp 47–65.
9. Saliba S, Rosales W, Escallon A Jr, et al: Extrarectal colonic carcinoma: analysis of 138 cases with long-term follow-up. South Med J 79(1):12–16, 1986.
10. Adjuvant therapy of colon cancer—results of a prospectively randomized trial. Gastrointestinal Tumor Study Group. N Engl J Med 310(12):737–743, 1984.
11. Russell AH, Tong D, Dawson LE, et al: Adenocarcinoma of the proximal colon. Sites of initial dissemination and patterns of recurrence following surgery alone. Cancer 53(2):360–367, 1984.
12. Willett C, Tepper JE, Cohen A, et al: Local failure following curative resection of colonic adenocarcinoma. Int J Radiat Oncol Biol Phys 10(5):645–651, 1984.
13. Farrands PA, Britton DC: Intervention in large bowel carcinogenesis—does screening improve prognosis? Scand J Gastroenterol 104(Suppl):151–159, 1985.
14. Eddy D: ACS report on the cancer-related health checkup. CA 30(4):193–240, 1980.
15. Eddy DM: Computer models and the evaluation of colon cancer screening programs, in Winawer SJ, Schottenfeld D, Sherlock P (eds): Colorectal Cancer: Prevention, Epidemiology and Screening. New York, Raven Press, Progress in Cancer Research and Therapy, vol 13, pp 285–298, 1980.
16. Chamberlain J, Day NE, Hakama M, et al: UICC workshop of the project on evaluation of screening programmes for gastrointestinal cancer. Int J Cancer 37(3):329–334, 1986.
17. Crespi M, Weissman GS, Gilbertsen VA, et al: The role of proctosigmoidoscopy in screening for colorectal neoplasia. CA 34(3):158–166, 1984.
18. Frank, JW: Occult-blood screening for colorectal carcinoma: The benefits. Am J Prev Med 1(3):3–9, 1985.
19. Frank, JW: Occult-blood screening for carcinoma: the risks. Am J Prev Med 1(4):25–32, 1985.
20. Frank, JW: Occult-blood screening for colorectal carcinoma: the yield and the costs. Am J Prev Med 1(5):18–24, 1985.

21. Hardcastle JD, Armitage NC, Chamberlain J, et al: Fecal occult blood screening for colorectal cancer in the general population: results of a controlled trial. Cancer 58(2):397–403, 1986.

22. Kolata G: Debate over colon cancer screening, news. Science 229(4714):636–637, 1985.

23. Newell GR: Principles of cancer screening. Cancer Bull 37(5):258–260, 1985.

24. Simon JB: Occult blood screening for colorectal carcinoma: a critical review. Gastroenterology 88(3):820–837, 1985.

25. Stroehlein JR, Newell GR: Screening for early detection of colon cancer: suggestions for the primary care physician. Cancer Bull 34(6):274–276, 1982.

26. Winawer SJ, Schottenfeld D, Sherlock P: Screening for colorectal cancer: the issues. Gastroenterology 88(3):841–844, 1985.

27. Winchester DP: Screening for colorectal neoplasia, in Ingall JRF, Mastromarino AJ (eds): Carcinoma of the Large Bowel and its Precursors: Proceedings of A Conference Held in Detroit, Sept 27–28, 1984. New York, Liss, 1985, pp 13–21.

28. American Cancer Society: Cancer of the colon and rectum. Gallup report: 38, 1986.

29. Winawer SJ, Prorok P, Macrae F, et al: Surveillance and early diagnosis of colorectal cancer. Cancer Detect Prev 8(3):373–392, 1985.

30. Fleming WB: The cancer-related health check-up. A guide for medical practitioners. Med J Aust 143(6 Suppl):S33–S40, 1985.

31. Brown JS: Sigmoidoscopy in general practice. Practitioner 228(1395):837–839, 1984.

32. Ingall JRF, Mastromarino AJ (eds): Carcinoma of the large bowel and its precursors: Proceedings of a conference held in Detroit, Sept 27–28, 1984. New York, Liss, 1985, p 305.

33. Rodney WM, Felmar E, Auslander M: AAFP-ASGE conjoint course on flexible sigmoidoscopy. Family Pract Res J 5(4):209–215, 1986.

34. Battista, RN, Williams, JI, MacFarlane, LA: Determinants of primary medical practice in adult cancer prevention. Med Care 24(3):216–224, 1986.

35. Nichols S: General practitioners' awareness of colorectal cancer. Br Med J 292(6516):308–310, 1986.

36. Weissman GS, Winawer SJ, Sergi M, et al: Preliminary results of a multicenter evaluation of a 30 cm flexible sigmoidoscopy by non-endoscopists, abstract. Gastrointest Endosc 28:150, 1982.

37. Wilking N, Petrelli NJ, Herrera-Ornelas L, et al: A comparison of the 25-cm rigid proctosigmoidoscope with the 65-cm flexible endoscope in the screening of patients for colorectal carcinoma. Cancer 57(3):669–671, 1986.

38. Winnan G, Berci G, Panish J, et al: Superiority of the flexible to the rigid sigmoidoscope in routine proctosigmoidoscopy. N Engl J Med 302(18):1011–1012, 1980.

39. Zucker GM, Madura MJ, Chmiel JS, et al: The advantages of the 30-cm flexible sigmoidoscope over the 60-cm flexible sigmoidoscope. Gastrointest Endosc 30(2):59–64, 1984.

40. Macrae FA, St John DJB, Ambikapathy A, et al: Factors affecting compliance in colorectal cancer screening. Results of a study performed in Ballarat. Med J Aust 144(12):621–623, 1986.

41. Winawer SJ, Schottenfeld D, Sherlock P: Colorectal cancer: prevention, epidemiology, and screening. Raven Press, p 410, 1980.

42. Wolman SR, Mastromarino AJ (eds): Markers of colonic cell differentiation. New York, Raven Press, Progress in Cancer Research and Therapy, p 431, 1984.

43. Mastromarino AJ (ed): Biology and treatment of colorectal cancer metastasis: proceedings of the National Large Bowel Cancer Project 1984 Conference on Biology and Treatment of Colorectal Cancer Metastasis, Houston, Tex, Sept 13–15, 1984. Boston, Nijhoff, p 325, 1986.

44. McGill DB, Ahlquist DA: Hemoquant—an approach to screening for fecal occult blood, in Ingall JRF, Mastromarino AJ (eds): Progress in Clinical and Biological Research, Vol 186: Carcinoma of the Large Bowel and its Precursors. New York, Liss, 1985, pp 45–56, 1985.

ACKNOWLEDGMENTS

The author gratefully acknowledges the constructive comments of the ACS Texas Division Colorectal Task Force members, namely, H. Gray Carter, MD; John Hughes, MD; Mary Kowalski, RN; Edward Kramer, Jr, MD, MPH; Margaret Nathan; Larry Petta, MD; Donald Spencer, MD; Col Richard Stuart, MC; Arnold Walder, MD, PhD; Bernard Levin, MD; and James Morgan. The author also wishes to acknowledge the technical assistance of Deborah Maloney and Kathleen Robertson in preparing and editing this manuscript. Finally, appreciation is due the more than 2,000 Texas physicians who responded to the Texas Medical Association questionnaire designed to assess physician practices and attitudes toward colon cancer screening.

Texas Medical Association 120th Annual Session May 13–17, 1987 Houston

Houston— A Great Place To Be In May '87

Youthful, luxurious and probably habit forming—Houston—site of the 120th Annual Session offers excitement, hospitality, charm. When Texas Medical Association and Auxiliary members convene May 13–17 they will enjoy the city's famous Southern hospitality, cosmopolitan sophistication and cultural evolution.

A supercity—vast, varied, vital—Houston awes the world with its boundless energy, vibrant commerce, and its emergence into unchartered fields such as space, science, oceanography, medical research.

Take time to view the cityscapes—natural and manmade; visit the sports arenas—Astrodome and Summit; shop the Olympian malls. Experience the culture and the arts. Enjoy fine dining with a pinnacle view or regional fare in a hide-away. Marvel at the renowned Texas Medical Center, one of the three major complexes in the nation. Consisting of 29 colleges, schools, institutes and hospitals, the Center attracts students, scientists, patients from around the world.

Convention Facilities— Beyond Your Expectations

The annual meeting will be held in downtown Houston. The area has much to offer. The architecture will stun you—exciting, bold, futuristic. The superstructures stand as proud symbols of progress which has catapulted the city into the nation's fourth largest city.

The giant imposing structures—actually cities within cities—provide efficiency, quality, beauty to resident and visitor. The Albert Thomas Convention and Exhibit Center, part of the Houston Civic Center and the focal point for all meetings and exhibits for the TMA Session, offers superb exhibit space and meeting accommodations. The surrounding hotels where members and guests will be housed are outstanding. The Hyatt Regency, a contemporary architectural wonder, features a 30-floor open atrium and park-like lobby. Doubletree Hotel, elegantly French, offers deluxe rooms and suites overlooking Sam Houston Park. The hotel is connected to the downtown tunnel system which leads to major businesses, shops and restaurants. Auxiliary headquarters, Four Seasons Hotel, is eloquently contemporary—rich woods, handwoven oriental tapestries. A relaxed and comfortable atmosphere. The Whitehall Hotel has elegant public rooms filled with fine antiques. Holiday Inn—Downtown Houston, one of the world's largest, is convenient to other hotels and the Convention Center.

Scientific Sessions, House of Delegates and Exhibits—Albert Thomas Convention and Exhibit Center

Business Sessions (Boards, Councils, Committees, Delegates' Housing)—Hyatt Regency Houston

Auxiliary Headquarters—Four Seasons Hotel

General Housing/Meetings—Doubletree Hotel at Allen Center

General Housing/Meetings—The Whitehall

General Housing—Holiday Inn Houston—Downtown

Features

Exhibits—Scientific, Technical

Section Programs—Some 500 scientific presentations in Allergy, Asthma, and Clinical Immunology—Colon and Rectal Surgery—Digestive Diseases—Diseases of the Chest—Endocrinology—Family Practice—Internal Medicine—Neurological Surgery—Neurology—Nuclear Medicine—Obstetrics and Gynecology—Occupational Medicine—Oncology—Ophthalmology—Otolaryngology—Pathology—Pediatrics—Physical Medicine and Rehabilitation—Plastic, Reconstructive, and Maxillofacial Surgery—Psychiatry—Public Health—Radiology—Surgery—Urology.

Specialty Society Programs—In addition to numerous topics of general interest, you will have an opportunity for an update on your own particular specialty.

Sunrise Sessions—Informal presentations by guest speakers on topics of interest to all specialists. Have coffee with one of the professors from 8:15 to 9:15 am on Thursday, Friday and Saturday and join the discussions.

Sports/Alumni Events—Golf and Tennis Tournaments; Fun Run; Alumni Parties; Class Reunions.

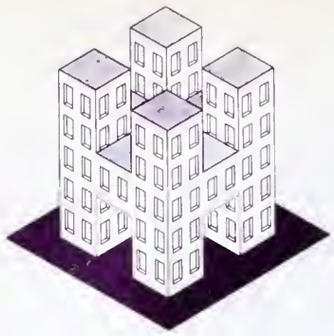
Auxiliary Program

The theme for the 1987 convention of the TMA Auxiliary will be "From This Moment On" in keeping with the progressive theme for the 1986–1987 year.

The convention will open with a gala champagne welcome reception honoring county presidents Wednesday, May 13. All business sessions will be held Thursday morning, May 14, including recognition of 1986–1987 award winners. The Thursday luncheon speaker will be Ninfa, Houston's highly successful entrepreneur and owner of the chain of Ninfa's Restaurants.

The 1987–1988 board will meet Friday, May 15, and the installation of officers will take place during the luncheon which will feature an outstanding speaker.

A wide array of special optional events has been planned for auxiliary members



during the 1987 convention. Among them will be a tour of River Oaks homes, a financial planning seminar by Dean Kanaly, a demonstration of the Four Seasons' "light cuisine" by the hotel's chef and a series of "Dine-Around" dinners offered for Thursday evening.

For additional information, contact TMA Auxiliary, 1801 North Lamar Blvd., Austin 78701, 512/477-6704.

Registration

There is no registration fee for members of the Texas Medical Association, for speakers and exhibitors in the annual session program, and for nonmembers such as officially-invited guests of the Association.

Registration fees are charged for some nonmember categories, and these are mentioned in the nonmember categories listed below:

Nonmember Registration Fees

a. Physicians	**$100**
b. Allied Health Disciplines—Nurses, Technicians, Medical Assistants	**$10**
c. In-Training—Interns, Residents, Fellows	**$10**
d. Students	**$10**
e. Prospective Exhibitors and Approved Visitors	**$50**
f. Spouses of Nonmember Physicians	**$10**

One Location for Registration for Session

(See hours indicated):

Albert Thomas Convention and Exhibit Center
East Hall, Smith Street Entrance

Wednesday, May 13, 9 am–5:30 pm
Thursday, May 14, 7 am–5:30 pm
Friday, May 15, 7 am–5:30 pm
Saturday, May 16, 7 am–3:30 pm

You may register in advance of the session by completing the Advance Registration Form printed here. Pick up badge and registration materials during above hours.

Guest Speakers

H. Whitney Boggs, Jr., MD
Shreveport, Lo
colon and rectal surgery

Robert Coles, MD
Combridge, Mass
child psychiotry

John S. Collis, MD
Clevelond, Ohio
neurological surgery

Reginald R. Cooper, MD
lowo City, lowo
orthopoedic surgery

John J. Coury, Jr., MD
Port Huron, Mich
surgery;
President, American Medical Assaciation

Dale Daniel, MD
San Diego, Calif
arthopoedic surgery

Scott F. Davies, MD
Minneopolis, Minn
internal medicine (pulmonory diseoses)

Charles A. Fager, MD
Burlingtan, Moss
neurologicol surgery

David N. F. Fairbanks, MD
Washingtan, DC
otoloryngology

Robert G. Feldman, MD
Boston, Mass
neurolagy ond pharmocalogy

Ian B. Fries, MD
Brick, NJ
orthopaedic surgery;
President, Notionol Flying Physicions Associotion

Rudolph P. Galask, MD
lowa City, lowa
obstetrics and gynecology

M. Eric Gershwin, MD
Davis, Calif
rheumotology/ollergy/immunology

Jerome C. Goldstein, MD
Washington, DC
otalaryngology

Stanley A. Herring, MD
Kirklond, Wosh
physical medicine and rehabilitation

Joseph Jankovic, MD
Houston, Tex
neuralogy

Ralph E. Kauffman, MD
Detroit, Mich
pediotrics ond phormocology

David W. Kennedy, MD
Baltimore, Md
otoloryngology

Ira J. Kodner, MD
St. Louis, Mo
colon ond rectal surgery

Steven M. Larson, MD
Bethesdo, Md
nucleor medicine

Pia Mellody, RN
Wickenburg, Ariz
alcahalism and chemical dependency counseling

Dean D. Metcalfe, MD
Bethesdo, Md
allergy and immunology

Stephen H. Miller, MD
Portland, Ore
plastic and reconstructive surgery

Byron A. Myhre, MD, PhD
Torrance, Calif
pathology

Richard M. Narkewicz, MD
South Burlington, Vt
pediotrics

Harold S. Nelson, MD
Denver, Colo
allergy and immunology

Eric Pfeiffer, MD
Tompa, Fla
geriotric psychiatry

Peter Randall, MD
Philodelphio, Po
plastic surgery

Robert C. Reeder, MD
Memphis, Tenn
plostic and reconstructive surgery

Ensor Rodriguez-Lopez, MD, PhD
Los Angeles, Calif
occupatianal medicine

J. James Rowsey, MD
Oklohoma City, Oklo
ophthalmalagy

Julio V. Santiago, MD
St. Louis, Mo
pediotrics; endocrinology ond metobolism

Herbert H. Schaumburg, MD
Bronx, NY
neuralogy

Rhea Seddon, MD
Houston, Tex
astranaut, oerospace medicine ond emergency medic

Edward A. Sickles, MD
San Francisco, Calif
radiology

J. Graham Smith, Jr., MD
Augusto, Go
dermatalagy

Volker K. H. Sonntag, MD
Phoenix, Ariz
neurological surgery

Theodore H. Stanley, MD
Salt Lake City, Utoh
onesthesiology

Theodore I. Steinman, MD
Boston, Moss
nephrology

Lenore C. Terr, MD
San Froncisco, Colif
psychiotry

David H. Thornberry
Austin, Tex
Member, State Board of Insurance

Henry J. L. Van Dyk, MD
New Orleans, Lo
ophthalmalagy and neurolagy

Joseph Westermeyer, MD, PhD
Minneopolis, Minn
psychiotry

he Four Freshmen—
otal Entertainment

e fabulous Four Freshmen—singers, sicians, entertainers—will dazzle as Medical Association and Auxiliary mbers with their versatility Friday ening, May 15, during the 1987 An- l Session. Featured attraction for the sociation/Auxiliary party, America's mber One Vocal and Instrumental artet will give a stirring performance day in the beautiful Imperial Ball- m, Hyatt Regency Hotel. The Bo- gles Band, a popular Houston dance hestra, will provide a "don't miss" ening. The party begins at 8 pm and ver at 1 am. There will be light hors euvres and a cash bar for cocktails. y proceeds will be donated to the xiliary Student Loan Fund.

Bojangles Bond Members

The "instrumental" quality which identifies the Freshmen Sound was brought to focus by their inventive concept of using their voices as musical instruments. Combined with their knowledge of harmony, the effect of a modern orchestral ensemble is created. Highly versatile, the Frosh trade around and play with professional skill seven instruments. Their albums, The Four Freshmen and Five Trombones, The Four Freshmen and Five Saxes, etc. are collector's items.

Fresh, different, appealing, the group is as popular in the 1980s as when they began singing as college freshmen in the 1950s and were "discovered" by Stan Kenton. "Day by Day," "Graduation Day," "How Can I Tell Her," and "It's a Blue World" will stir some good memories. Bob Flanigan, the leader and original member of the group, enthralls audiences with his outstanding trombone playing and wry humor. Saxophonist Audie Goodman sings second part and came to fame with the legendary Modernaires band. Mike Beisner sings third and plays a mean trumpet, while Rod Henley sings fourth vocal part and plays a variety of instruments including keyboards, trumpet and trombone.

Get a group together and plan a memorable evening with the Four Freshmen. The fun begins at 8 pm, Friday, May 15. Tickets are $25 per person and should be ordered in advance of the Session by completing the form here.

eneral Meeting
ıncheon Speakers
ҳamine the Future

h luncheons are scheduled in Room , Albert Thomas Convention Center, 15–2 pm. Purchase tickets ($20 per son) in advance by completing the n here.

President of the American Medical ociation, John J. Coury, Jr., MD, will lore "Challenges of American Medi- e" in his Friday, May 15, General eting Luncheon address in the Albert mas Convention Center. Dr. Coury, a eral and pediatric surgeon from Port on, has spent his tenure as President ting with colleagues over the nation arding the future of medicine and the ividual physician. He has served in nerous capacities with American dical Association and Michigan State dical Society. He is currently Chair- n of the Council of the World Medical ociation.

Dr. Rheo Seddon

Physician-Astronaut, Rhea Seddon, MD, will share her experience in space and provide information on NASA's future activities Saturday, May 16, at the General Meeting Luncheon. Dr. Seddon made her first trip beyond earth's boundaries as Mission Specialist in April 1985. She was responsible for deployment of the Leasat Satellite, Remote Manipulator System operations and the American Flight Echocardiograph Experiment.

Dr. Seddon received her MD degree from the University of Tennessee College of Medicine in 1973. Between the period of her internship and residency, she served as an emergency room physician in Mississippi and Tennessee hospitals, and now serves in this capacity in the Houston area in her spare time. Dr. Seddon also has done research into the effects of radiation therapy on nutrition in cancer patients. Married to Astronaut Robert L. Gibson, they have a four-year-old son.

The Saturday agenda also includes the installation of David Vanderpool, MD, Dallas, as President of Texas Medical Association for 1987–1988.

1987 Annual Session Advance Registration Form (please print)

name

address

city state zip

specialty

Members, please check all applicable spaces below:

- ☐ Physician
- ☐ Intern/Resident/Fellow
- ☐ Medical Student
- ☐ TMA Officer
- ☐ TMA Trustee
- ☐ TMA Delegate
- ☐ TMA Alternate Delegate
- ☐ TMA Councilor
- ☐ TMA Vice Councilor
- ☐ TMA Council/Committee
- ☐ **AMA Member**
- ☐ AMA Delegate
- ☐ AMA Alternate Delegate
- ☐ CMS President
- ☐ 50 Year Club
- ☐ Hospital Medical Staff Section Representative
- ☐ TEXPAC
- ☐ TEXPAC 300 Club
- ☐ MSS Executive Council
- ☐ MSS Chapter Officer
- ☐ MSS Chairman
- ☐ RPS Chairman
- ☐ RPS Councilor
- ☐ RPS Executive Council
- ☐ Speaker
- ☐ Scientific Exhibitor
- ☐ **Satisfying state level meeting requirement**

Nonmember	Fee
☐ **Speakers, Exhibitors**	waived
☐ **TMA and County Medical Society Staff and Family**	waived
☐ **Physicians**	$100
☐ **Interns, Residents, Fellows**	$10
☐ **Medical Students**	$10
☐ **Allied Health Personnel**	$10
☐ **Prospective Exhibitors, Approved Visitors**	$50
Nonmember's Family	
☐ Family of Nonmembers	$10
☐ Children (21 and under)	waived

Please mail check and registration form to: Texas Medical Association Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Advance Ticket Reservation Form

name

address

city state zip

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Complete the advance ticket reservation order form, return it to TMA with your check. Pick up tickets at the registration area. Note ticket sales location and hours.

Number of Tickets	Function and Price inclusive of tax and gratuity	Amount
_____	**The Four Freshmen BoJangles Band** Friday, May 15, 8 pm–1 am $25 per person	_____
_____	**General Meeting Luncheon John J. Coury, Jr., MD** Friday, May 15, 12:15–2 pm $20 per person	_____
_____	**General Meeting Luncheon Astronaut Rhea Seddon, MD** Saturday, May 16, 12:15–2 pm $20 per person	_____
	TOTAL	$_____

Advance registration forms and ticket money must be received by **April 7. No refunds after April 29.**

Please complete and return before April 7 to: Texas Medical Association, Business Office, 1801 North Lamar Blvd., Austin, Texas 78701

Final Program Order Form

The Program and Abstracts of the 120th Texas Medical Associatio Annual Session will be available in early April. If you wish to ord your copy in advance, please return this form with a check for $5.(to Texas Medical Association, Business Office, 1801 North Lam Blvd., Austin, Texas 78701.

Please send a copy of the Program and Abstracts for the 120th Annual Session to:

name

address

city state zip

My check for $5.00 is enclosed.

ake Your servations Now

equests will be processed first-me, first-served by the Housing Bu-au, Greoter Houston Convention & sitors Council through its comput-ized system.

omplete ***in full*** the ***Official Housing equest Form*** and return it imme-ately to:

xas Medicol Association Housing ureau
300 Main
ouston, Texas 77002-9396

o not send housing form to Texas edicol Association. This will only eloy your request.

nly reservations received on the ***fficial Housing Request Form*** will e accepted. Hotels will not accept servations directly, and telephone quests cannot be accepted.

st ***three*** hotels in order of eference.

eadline for reservations is pril 29.

firmations

oom confirmation will be sent to you ***irectly*** from the hotel within three eeks of receipt of your request by e Housing Bureau. Please check it refully to be sure all informotion is rrect.

m Deposits

o not send any room deposit with lousing Form. Should a deposit be equired, the hotel will request it.

eservations will be held until 6 pm f the orrival dote unless a later ar-vol time is indicated. If a deposit is equired to hold your room past pm, you will be notified at the time f confirmation by hotel. The deposit nould be moiled directly to the hotel.

nges and Cancellations

ny chonges in room reservations, rrivol or departure dotes should be ent in writing directly to the hotel.

ll cancellations should be sent to ie Housing Bureau immediately so iat others can be accommodated. our notice of cancellation must be eceived within 48 hours of your cheduled arrival or your deposit annot be refunded. ***DON'T BE A IO SHOW!***

ttle Service

huttle service will be provided be-ween hotels and Convention Center.

Participating hotels and codes:

Deadlines for Reservations—April 29

1. **Four Seasons Hotel* (FSDT)**
   1300 Lamar Street
   (Auxiliary Headquarters; General Housing)

   Singles $75
   Doubles $85

2. **Holiday Inn Houston—Downtown (HID)**
   801 Calhoun Street
   (General Housing)

   Singles/Doubles $58

3. **Doubletree Hotel* (DBH)**
   at Allen Center
   400 Dollas Street
   (Housing for Program Participants)

   Singles/Doubles $75

4. **Hyatt Regency Houston* (HR)**
   1200 Louisiana Street
   (Delegates' Housing; Board, Council, Committee Meetings)

   Singles $83
   Doubles $85

5. **The Whitehall (WHIT)**
   1700 Smith Street
   (General Housing)

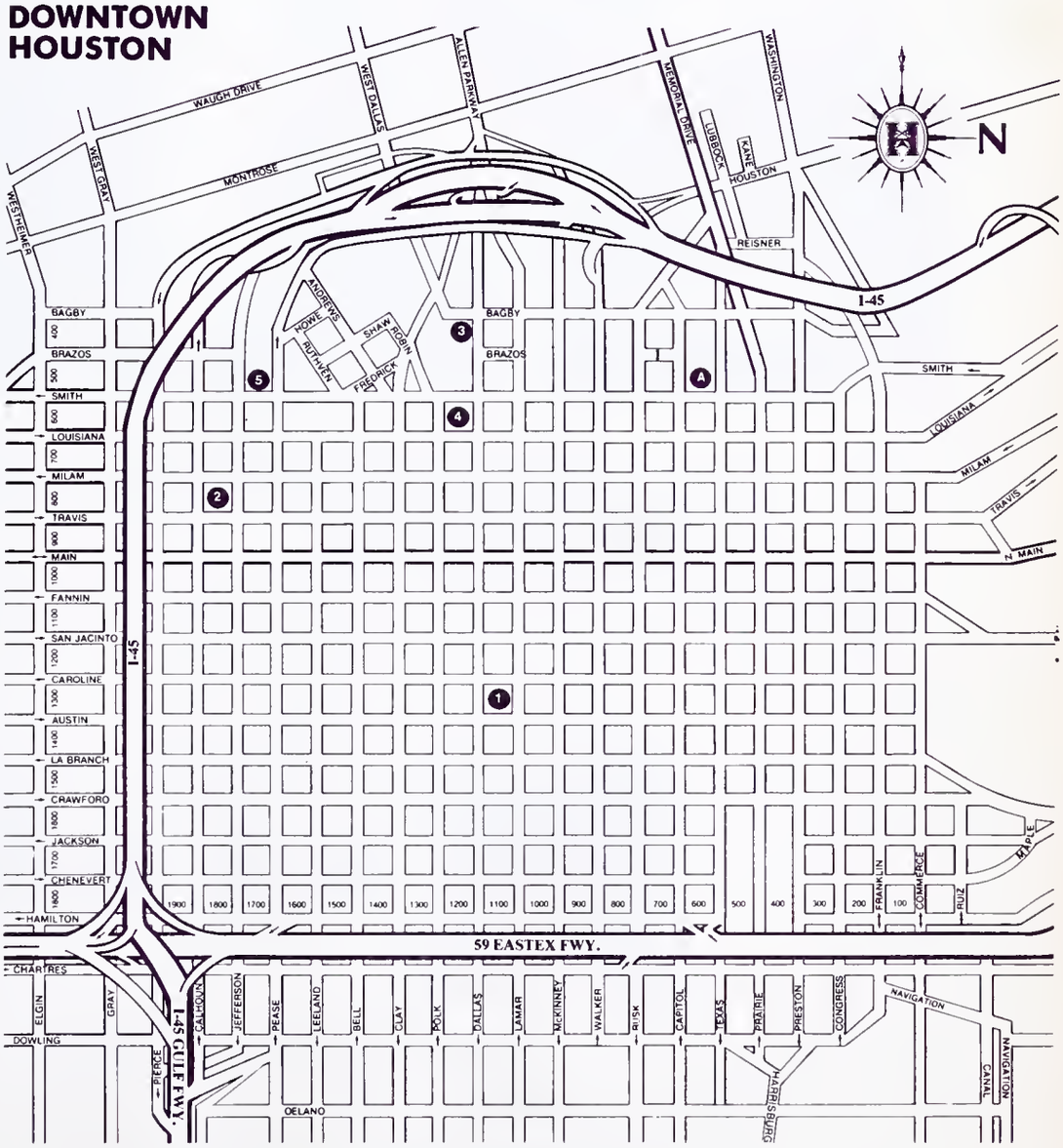
   Singles/Doubles $65

A **Albert Thomas Convention and Exhibit Center**
   612 Smith Street
   (Scientific Sessions, House of Delegates Meetings, Exhibits)

The above room rotes do not include 11% occuponcy tax and daily parking fees.

*Headquarters Hotels

DOWNTOWN HOUSTON



FOR HOUSING BUREAU USE ONLY

Texas Medical Association
120th Annual Session
May 13–17, 1987
Houston

MAIL TO:

TEXAS MEDICAL ASSN.
HOUSING BUREAU
3300 MAIN
HOUSTON, TX 77002-9396

OFFICIAL HOUSING REQUEST FORM

• PLEASE READ CAREFULLY •

_ PLEASE **PRINT** OR **TYPE** ALL ITEMS TO ASSURE ACCURACY.
_ COMPLETE EACH PART BELOW IN DETAIL FOR CORRECT AND RAPID COMPUTER PROCESSING.
_ SHOULD MORE THAN **TWO (2)** ROOMS BE NEEDED, FORM MAY BE DUPLICATED, OR SUPPLEMENTAL ROOM LIST **MUST** BE ATTACHED USING SAME FORMAT AS IN PART III.
_ **ALL** CONFIRMATIONS WILL BE SENT TO INDIVIDUAL INDICATED IN PART I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

NAME OF PERSON REQUESTING ROOMS

(FIRST NAME) (LAST)

(NAME OF CLINIC, GROUP, OR COMPANY)

(STREET ADDRESS OR P.O. BOX NUMBER)

(CITY) (STATE) (ZIP)

(COUNTRY) (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: Select **THREE** Hotel/Motels of your choice. No request will be processed without **THREE** choices.

FIRST CHOICE (HOTEL CODE) SECOND CHOICE (HOTEL CODE) THIRD CHOICE (HOTEL CODE)

PART III

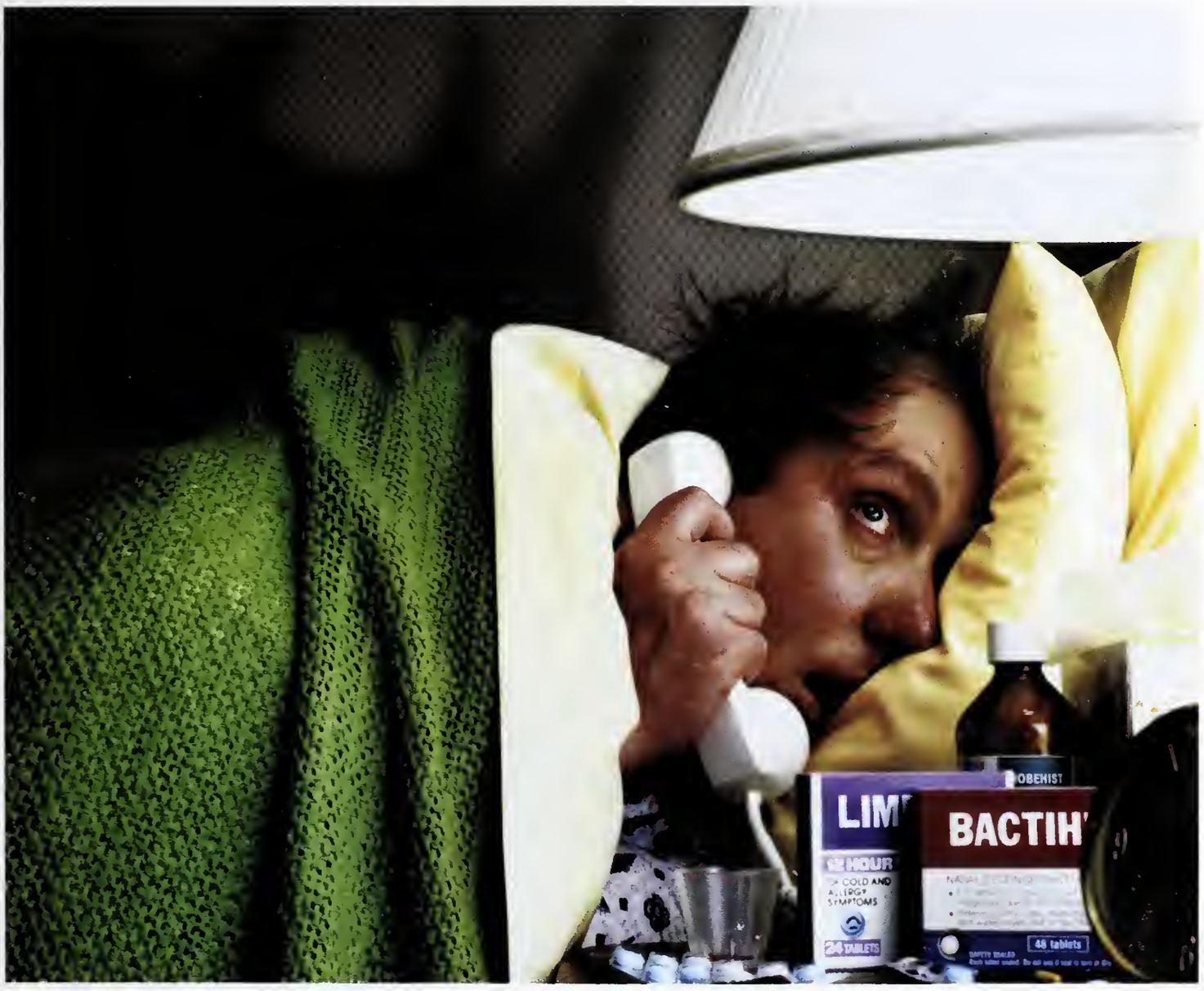
INSTRUCTIONS: 1. **PRINT** OR **TYPE** NAMES OF **ALL** PERSONS OCCUPYING EACH ROOM.
2. SELECT TYPE ROOM DESIRED WITH ARRIVAL AND DEPARTURE DATES.
3. SUPPLEMENTAL LIST FOR ADDITIONAL ROOM **MUST** USE SAME FORMAT.
4. PRINT OR TYPE LAST NAME FIRST.

	OCCUPANTS NAME/S (PRINT LAST NAME FIRST)	P + 1—Parlor & one bedroom	P + 2—Parlor & two bedrooms
ROOM NO. 1	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.
ROOM NO. 2	1 2 3 4	CHECK ONE ☐ SINGLE ☐ P + 1 ☐ DOUBLE ☐ TWIN ☐ P + 2 ☐ TRIPLE ☐ QUAD	ARR. DATE _____ DEP. DATE _____ ARRIVAL TIME _____ ☐ AM ☐ PM (Check One) **Note:** Reservation will be held only until 6 p.m. unless special arrangements are made directly with hotel. The hotel may request a deposit.

FOR USE OF ASSN. ONLY

NOTE: PLEASE RECHECK ALL ITEMS FOR CORRECT INFORMATION

Oddly enough, "wild rhinos" talk to you only after they've dried up



...from too many days on drying antihistamines.

Back when all he had was a simple, runny rhinovirus, antihistamines made him feel more civilized. But now that sinusitis and bronchitis have set in, that continual barrage of self-medication with drying antihistamines has turned him into a "wild rhino."

Now his sinuses throb. His chest aches. And no matter how much he coughs and blows, those sluggish secretions don't budge.

"Wild rhinos" need more than a lesson in self-medication. They need your prescription for ENTEX® LA. ENTEX LA opens swollen sinus passages so he can breathe easier. Then it thins slow-moving respiratory secretions so coughing becomes less painful—more productive.

What's more, ENTEX LA doesn't contain anything to sedate him. Because a "wild rhino" is a lot easier to tame when his head is clear.

ANTIHISTAMINE-FREE

Entex® LA

PHENYLPROPANOLAMINE HCl. 75 mg
GUAIFENESIN 400 mg
IN A SPECIAL BASE TO PROVIDE A PROLONGED THERAPEUTIC EFFECT.

Rx ONLY

Just decongestion and drainage... without antihistamine drying and drowsiness.

© 1986 NEPI

Please see next page for brief summary of prescribing information

ANTIHISTAMINE-FREE

Entex® LA

PHENYLPROPANOLAMINE HCl 75 mg
GUAIFENESIN 400 mg
IN A SPECIAL BASE TO PROVIDE A PROLONGED THERAPEUTIC EFFECT

Before prescribing or administering, see package circular for full product information. The following is a brief summary.

INDICATIONS AND USAGE: Entex LA is indicated for the symptomatic relief of sinusitis, bronchitis, pharyngitis, and coryza when these conditions are associated with nasal congestion and viscous mucus in the lower respiratory tract.

CONTRAINDICATIONS: Entex LA is contraindicated in individuals with known hypersensitivity to sympathomimetics, severe hypertension, or in patients receiving monoamine oxidase inhibitors.

WARNINGS: Sympathomimetic amines should be used with caution in patients with hypertension, diabetes mellitus, heart disease, peripheral vascular disease, increased intraocular pressure, hyperthyroidism, or prostatic hypertrophy.

PRECAUTIONS: Information for Patients: Do no crush or chew Entex LA tablets prior to swallowing.

Drug Interactions: Entex LA should not be used in patients taking monoamine oxidase inhibitors or other sympathomimetics.

Drug/Laboratory Test Interactions: Guaifenesin has been reported to interfere with clinical laboratory determinations of urinary 5-hydroxyindoleacetic acid (5-HIAA) and urinary vanilmandelic acid (VMA).

Pregnancy: Pregnancy Category C. Animal reproduction studies have not been conducted with Entex LA. It is also not known whether Entex LA can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Entex LA should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether the drugs in Entex LA are excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants, a decision should be made whether to discontinue nursing or to discontinue the product, taking into account the importance of the drug to the mother.

Pediatric Use: Safety and effectiveness of Entex LA tablets in children below the age of 6 have not been established.

ADVERSE REACTIONS: Possible adverse reactions include nervousness, insomnia, restlessness, headache, nausea, or gastric irritation. These reactions seldom, if ever, require discontinuation of therapy. Urinary retention may occur in patients with prostatic hypertrophy.

OVERDOSAGE: The treatment of overdosage should provide symptomatic and supportive care. If the amount ingested is considered dangerous or excessive, induce vomiting with ipecac syrup unless the patient is convulsing, comatose, or has lost the gag reflex, in which case perform gastric lavage using a large-bore tube. If indicated, follow with activated charcoal and a saline cathartic. Since the effects of Entex LA may last up to 12 hours, treatment should be continued for at least that length of time.

NDC 0149-0436-01 Bottle of 100

CAUTION: Federal law prohibits dispensing without prescription.

ENX LATB-BS7

REVISED JULY 1985

Norwich Eaton
Norwich Eaton Pharmaceuticals, Inc.
Norwich, New York 13815-0231
A Procter & Gamble Company

Happiness is More than Medical Practice.

Happiness is family and loved ones. Leisure hours with friends. Travel. Cheering your alma mater's football team to victory. A burned mortgage on your dream home. Well-educated children. The freedom that comes with financial independence. In fact, financial independence buys most of it.

Whether your life is absorbed in treating patients, caring for a family or preparing for an abundant and enjoyable retirement–or all of these at the same time–Kanaly Trust Company can help.

Financial advisors to physicians and surgeons, we specialize in the coordination of personal and closely held business finance. And we do it without sales commissions and related conflicts of interest. For a happy, enjoyable future, phone or write today.

Kanaly Trust Company
Financial advice in your best interest.
4550 Post Oak Place, Houston, Texas 77027, 713/626-9483

MEDEXCHANGE
Quality Used Medical Equipment & Service

SPECIAL OF THE MONTH

GRASS - 17 Channel E.E.G machine
GRASS - Evoke Potential / MOD-10
TECA - TE-4 E.M.G. w/computer
ALL for **$24,500.00**

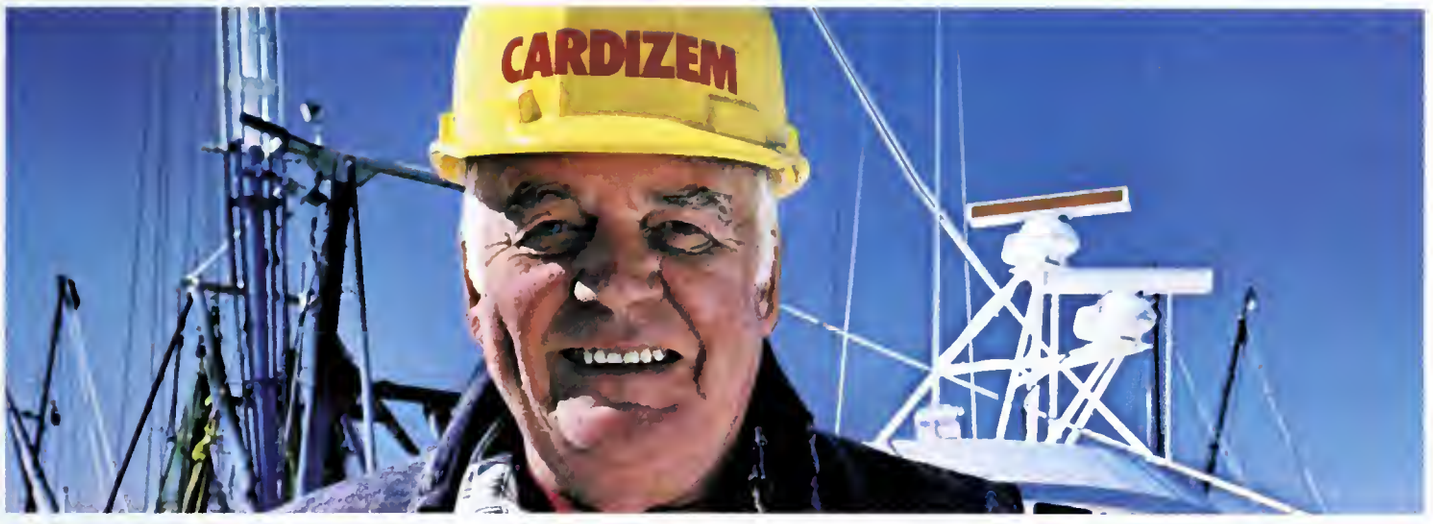
Quality Used Medical Equipment

- SELL
- REPAIR
- BUY
- REFURBISHMENT

Everything from Auto claves to X-Rays!
If We Dont't Have It IN STOCK
We Will FIND IT For You!!

P.O BOX 18164
DALLAS, TEXAS 75218
PHONE 214 369•3960
or Metro 229•9253

*Ask about our LEASING PROGRAMS!



CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%).

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 7/86

See complete Professional Use Information before prescribing.

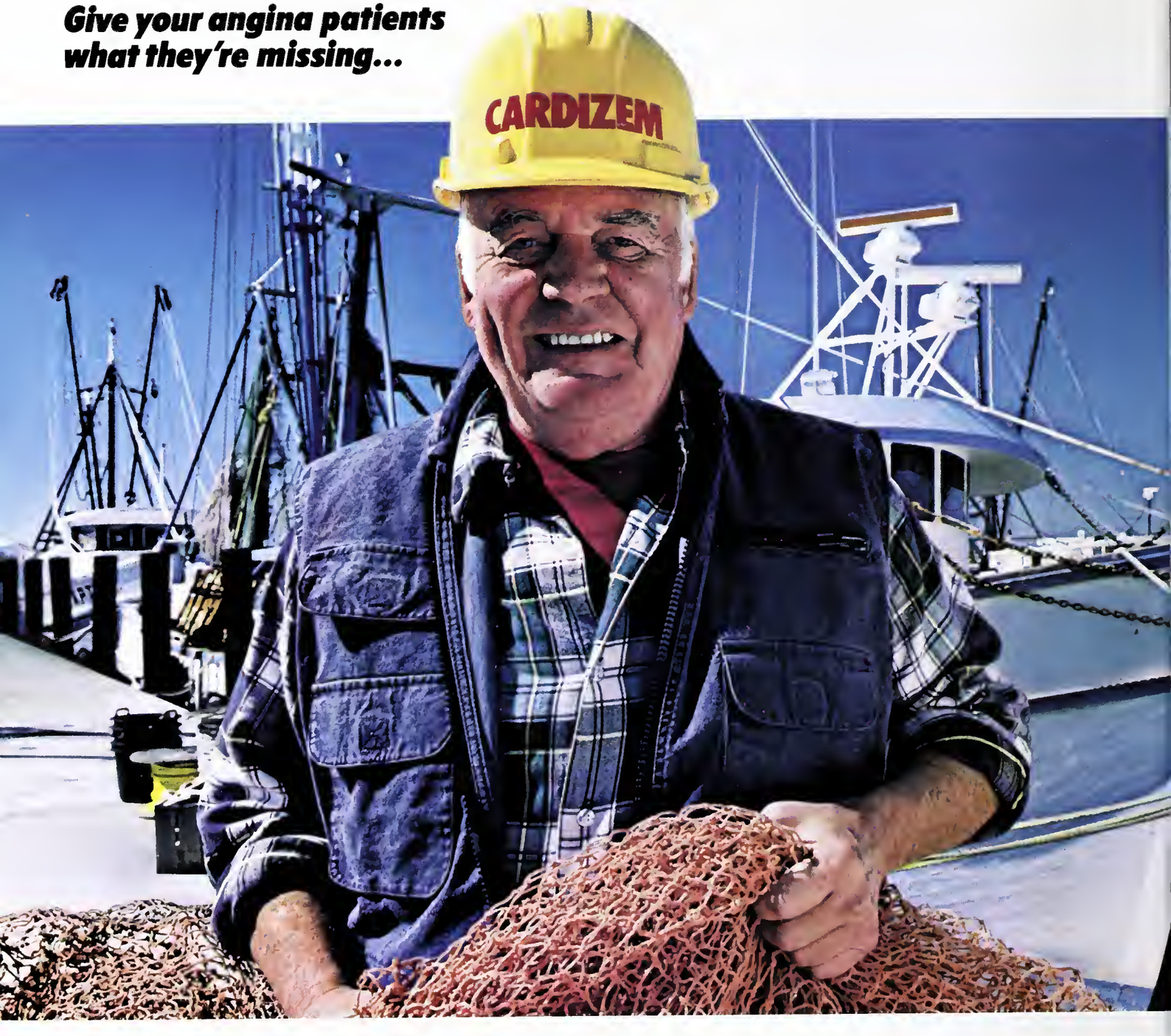
References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983, 106(6):1341-1347.* ***2.*** *Shapira W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984,24(Dec):150-159.* ***3.*** *Johnston DL, Lesoway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris. A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985,55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease. When to use which. Mod Med 1982,50(Sept):94-116.*

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0246M6

Give your angina patients what they're missing...



CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3]****
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

****See Warnings and Precautions.***

Please see brief summary of prescribing information on the next page.

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Cardiopulmonary arrest following penetrating trauma: guidelines for emergency hospital management of presumed exsanguination. Thomas K. Jones, MD, Glenn R. Barnhart, MD, and Lazar J. Greenfield, MD. American Association for the Surgery of Trauma, *The Journal of Trauma,* vol 27, no 1, 1987, pp 24–31.

Exsanguination may be presumed in pale, mottled, unresponsive trauma victims with no palpable pulse nor spontaneous respirations with noncranial penetrating wounds. Under ideal circumstances, those victims initially witnessed to have some signs of life can be successfully revived in 5% to 25% of cases. The chance for a successful outcome influences the decision to initiate resuscitation and depends on the mode of injury, anatomic location of the wound, and elapsed time until presentation as well as the organization of the available facilities and personnel. The resuscitative algorithm for presumed exsanguination is markedly different from the (Advanced Cardiac Life Support) ACLS guidelines for cardiogenic arrest and requires some degree of surgical expertise. After confirming the witnessed cardiopulmonary arrest from presumed exsanguination, the four phases of resuscitation are restoring central oxygenation, controlling internal hemorrhage, reestablishing spontaneous cardiac function, and definitively repairing the injury. Regardless of the type or location of the noncranial penetrating injury, these phases must be accomplished sequentially to minimize the risks of cerebral and cardiac anoxia.

A framework for the study of medical depression. Michael K. Popkin, MD, Allan L. Callies, Eduardo A Colon, MD. Cliggott Publishing Company, *Psychosomatics,* vol 28, no 1, January 1987, pp 27–30, 33.

The authors present a framework that classifies "medical depressive syndromes" according to three critical variables: nature of the medical illness, integrity of brain structure, and status of cognition/memory. They propose that this construct initially be applied to study organic affective syndrome, regarded by them as the most straightforward of the medical depressive syndromes. Assignment of groups of patients to the appropriate cells of the model may help to clarify differences in the natural course and treatment responsiveness of these disorders.

Classification of calcium antagonists. Theophile Godfraind, MD, PhD. Technical Publishing, *American Journal of Cardiology,* vol 59, 1987, pp 11B–23B.

Drugs of several chemical families have been identified as calcium antagonists. This article examines some pharmacologic properties of these drugs to clarify their terminology and their classification and to provide a rationale for their clinical use. Studies with nifedipine show quantitatively that the therapeutic effect in angina is related to the interaction of this drug with membrane calcium channels in human coronary arteries. This gives support to a classification based on studies at the molecular, tissue, and organ levels. Among calcium antagonists, calcium entry blockers are defined as agents able to block calcium inward fluxes evoked by various stimuli. They may be subdivided in two groups. Group I is the group of selective calcium entry blockers. Group IA consists of those agents selective for slow calcium channels in myocardium (slow channel blockers); the leading agents are verapamil, nifedipine, and diltiazem. Group IB contains agents without action on slow calcium channels in myocardium but with selective action on arteries; the leading agents are cinnarizine and flunarizine. Group II is the group of nonselective calcium entry blockers. Group IIA contains agents acting at similar concentration on calcium and on fast sodium channels. Group IIB consists of agents interacting with calcium channels while having another primary site of action. Other agents modulate calcium movements by an action on sodium-calcium exchange and by an action within the cell. Their identification requires the use of cell biology. The actual clinical uses of these drugs are consistent with this pharmacologic classification.

Evolution of antifungal agents: past, present, and future. Edouard Drouhet and Bertrand Dupont. Copyright 1987, The University of Chicago, vol 9, supp 1, January-February 1987, pp S4–S14.

Important progress has been achieved in antifungal chemotherapy in recent years. Two groups of drugs are now used: those produced by various organisms and those made synthetically. In the first group, only amphotericin B (1956) administered systemically is active in numerous deep mycoses. Although toxicity limits the use of amphotericin B, it is still the drug of choice for systemic mycoses. Griseofulvin was the first agent used for oral tratment of dermatophytoses. The introduction of flucytosine began a new era in chemotherapy; however, although flucytosine is orally administered and rapidly distributed, its antifungal activity is limited to cryptococcosis and systemic candidosis. The rapid induction of flucytosine-resistant mutants led to the development of treatment regimens of amphotericin B plus flucytosine. With the development of imidazole derivatives in 1969, a new generation of azole antifungal agents has emerged. Of these, only ketoconazole was orally active. New azole derivatives and triazoles have been synthesized, but only itraconazole has been successful in the treatment of superficial and deep mycoses in humans. Future trends for the development of agents with fungicidal activity, wider spectra, and better distribution are proposed. The association of immunotherapy with antifungal chemotherapy may offer new treatments for fungal infections in immunocompromised patients.

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Please indicate six key words for indexing.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within four months of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Mean,

Powerful against susceptible pathogens.*

lean &

Easy on tight budgets.

clean.

Gentle to patients (generally well tolerated).

The one antimicrobial that belongs on every formulary.

Once-a-day

Rocephin®

ROCHE

IV·IM

ceftriaxone sodium/Roche

* ROCEPHIN is indicated in the following infections: bacterial septicemia, bone and joint, intra-abdominal, lower respiratory tract, skin and skin structure, urinary tract, bacterial meningitis and gonorrhea. Please see summary of product information on adjacent page for indicated susceptible organisms.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved

Please see adjacent page for summary of product information.

Rocephin® IV·IM ROCHE®
ceftriaxone sodium/Roche

Before prescribing, please consult complete product information, a summary of which follows:

MICROBIOLOGY The bactericidal activity of ceftriaxone results from inhibition of cell wall synthesis Ceftriaxone has a high degree of stability in the presence of beta-lactamases, both penicillinases and cephalosporinases, of gram-negative and gram-positive bacteria Ceftriaxone is usually active against the following microorganisms *in vitro* and in clinical infections (see Indications and Usage)

GRAM-NEGATIVE AEROBES Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae (including ampicillin-resistant strains), *H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *Neisseria gonorrhoeae* (including penicillinase and nonpenicillinase producing strains), *Neisseria meningitidis, Proteus mirabilis, Proteus vulgaris, Morganella morganii* and *Serratia marcescens*

Note Many strains of the above organisms that are multiply resistant to other antibiotics, e g, penicillins, cephalosporins and aminoglycosides, are susceptible to ceftriaxone sodium

Ceftriaxone is also active against many strains of *Pseudomonas aeruginosa*

GRAM-POSITIVE AEROBES Staphylococcus aureus (including penicillinase-producing strains) and *Staphylococcus epidermidis* (Note methicillin-resistant staphylococci are resistant to cephalosporins, including ceftriaxone), *Streptococcus pyogenes* (Group A beta-hemolytic streptococci), *Streptococcus agalactiae* (Group B streptococci) and *Streptococcus pneumoniae* (Note Most strains of enterococci, *Streptococcus faecalis* and Group D streptococci are resistant)

Ceftriaxone also demonstrates *in vitro* activity against the following microorganisms, although the clinical significance is unknown

GRAM-NEGATIVE AEROBES Citrobacter freundii, Citrobacter diversus, Providencia species (including *Providencia rettgeri*), *Salmonella* species (including *S typhi*), *Shigella* species and *Acinetobacter calcoaceticus*

ANAEROBES Bacteroides species, *Clostridium* species (Note most strains of C *difficile* are resistant)

SUSCEPTIBILITY TESTING Standard susceptibility disk method Quantitative methods that require measurement of zone diameters give the most precise estimate of antibiotic susceptibility One such procedure (Bauer AW, Kirby WMM, Sherris JC, Turck M Antibiotic Susceptibility Testing by a Standardized Single Disk Method, *Am J Clin Pathol* 45 493-496, 1966 Standardized Disk Susceptibility Test, *Federal Register* 39 19182-19184 1974, National Committee for Clinical Laboratory Standards, Approved Standard ASM 2, Performance Standards for Antimicrobial Disk Susceptibility Tests, July 1975) has been recommended for use with disks to test susceptibility to ceftriaxone

Laboratory results of the standardized single-disk susceptibility test using a 30-mcg ceftriaxone disk should be interpreted according to the following three criteria

1 Susceptible organisms produce zones of 18 mm or greater, indicating that the tested organism is likely to respond to therapy
2 Organisms that produce zones of 14 to 17 mm are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (eg, urine), in which high antibiotic levels are attained
3 Resistant organisms produce zones of 13 mm or less, indicating that other therapy should be selected

Organisms should be tested with the ceftriaxone disk, since ceftriaxone has been shown by *in vitro* tests to be active against certain strains found resistant to cephalosporin class disks

Organisms having zones of less than 18 mm around the cephalothin disk are not necessarily of intermediate susceptibility or resistant to ceftriaxone

Standardized procedures require use of control organisms The 30-mcg ceftriaxone disk should give zone diameters between 29 and 35 mm, 22 and 28 mm and 17 and 23 mm for the reference strains *E coli* ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853, respectively

DILUTION TECHNIQUES Based on the pharmacokinetic profile of ceftriaxone, a bacterial isolate may be considered susceptible if the MIC value for ceftriaxone is not more than 16 mcg/ml Organisms are considered resistant to ceftriaxone if the MIC is equal to or greater than 64 mcg/ml Organisms having an MIC value of less than 64 mcg/ml, but greater than 16 mcg/ml, are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (eg, urine), in which high antibiotic levels are attained

E coli ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853 are also the recommended reference strains for controlling ceftriaxone dilution tests Greater than 95% of MICs for the *E coli* strain should fall within the range of 0 016 to 0 5 mcg/ml The range for the *S aureus* strain should be 1 to 2 mcg/ml, while for the *P aeruginosa* strain the range should be 8 to 64 mcg/ml

INDICATIONS AND USAGE: Rocephin is indicated for the treatment of the following infections when caused by susceptible organisms

LOWER RESPIRATORY TRACT INFECTIONS caused by *Strep pneumoniae, Streptococcus* species (excluding enterococci), *Staph aureus, H influenzae, H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *E coli, E aerogenes, Proteus mirabilis* and *Serratia marcescens*

SKIN AND SKIN STRUCTURE INFECTIONS caused by *Staph aureus, Staph epidermidis, Streptococcus* species (excluding enterococci), *E cloacae, Klebsiella* species (including *K pneumoniae*), *Proteus mirabilis* and *Pseudomonas aeruginosa*

URINARY TRACT INFECTIONS (complicated and uncomplicated) caused by *E coli, Proteus mirabilis, Proteus vulgaris, M morganii* and *Klebsiella* species (including *K pneumoniae*)

UNCOMPLICATED GONORRHEA (cervical/urethral and rectal) caused by *Neisseria gonorrhoeae*, including both penicillinase and nonpenicillinase producing strains

PELVIC INFLAMMATORY DISEASE caused by *N gonorrhoeae*

BACTERIAL SEPTICEMIA caused by *Staph aureus, Strep pneumoniae, E coli, H influenzae* and *K pneumoniae*

BONE AND JOINT INFECTIONS caused by *Staph aureus, Strep pneumoniae, Streptococcus* species (excluding enterococci), *E coli, P mirabilis, K pneumoniae* and *Enterobacter* species

INTRA-ABDOMINAL INFECTIONS caused by *E coli* and *K pneumoniae*

MENINGITIS caused by *H influenzae, N meningitidis* and *Strep pneumoniae* Ceftriaxone has also been used successfully in a limited number of cases of meningitis and shunt infections caused by *Staph epidermidis* and *E coli*

PROPHYLAXIS The administration of a single dose of ceftriaxone preoperatively may reduce the incidence of postoperative infections in patients undergoing coronary artery bypass surgery

Although ceftriaxone has been shown to have been as effective as cefazolin in the prevention of infection following coronary artery bypass surgery, no placebo-controlled trials have been conducted to evaluate any cephalosporin antibiotic in the prevention of infection following coronary artery bypass surgery

SUSCEPTIBILITY TESTING Before instituting treatment with Rocephin, appropriate specimens should be obtained for isolation of the causative organism and for determination of its susceptibility to the drug Therapy may be instituted prior to obtaining results of susceptibility testing

CONTRAINDICATIONS: Rocephin is contraindicated in patients with known allergy to the cephalosporin class of antibiotics

WARNINGS: BEFORE THERAPY WITH ROCEPHIN IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE TO DETERMINE WHETHER THE PATIENT HAS HAD PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS, PENICILLINS OR OTHER DRUGS THIS PRODUCT SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS ANTIBIOTICS SHOULD BE ADMINISTERED WITH CAUTION TO ANY PATIENT WHO HAS DEMONSTRATED SOME FORM OF ALLERGY, PARTICULARLY TO DRUGS SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE THE USE OF SUBCUTANEOUS EPINEPHRINE AND OTHER EMERGENCY MEASURES

Pseudomembranous colitis has been reported with the use of cephalosporins (and other broad spectrum antibiotics), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with antibiotic use

ROCEPHIN® (ceftriaxone sodium/Roche)

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia Studies indicate a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis Cholestyramine and colestipol resins have been shown to bind to the toxin *in vitro*

Mild cases of colitis respond to drug discontinuance alone Moderate to severe cases should be managed with fluid, electrolyte and protein supplementation as indicated

When the colitis is not relieved by drug discontinuance or when it is severe, oral vancomycin is the treatment of choice for antibiotic-associated pseudomembranous colitis produced by C *difficile* Other causes of colitis should also be considered

PRECAUTIONS: *GENERAL* Although transient elevations of BUN and serum creatinine have been observed, at the recommended dosages, the nephrotoxic potential of Rocephin is similar to that of other cephalosporins

Ceftriaxone is excreted via both biliary and renal excretion (see Clinical Pharmacology) Therefore, patients with renal failure normally require no adjustment in dosage when usual doses of Rocephin are administered, but concentrations of drug in the serum should be monitored periodically If evidence of accumulation exists, dosage should be decreased accordingly

Dosage adjustments should not be necessary in patients with hepatic dysfunction, however, in patients with both hepatic dysfunction and significant renal disease, Rocephin dosage should not exceed 2 gm daily without close monitoring of serum concentrations

Alterations in prothrombin times have occurred rarely in patients treated with Rocephin Patients with impaired vitamin K synthesis or low vitamin K stores (e g, chronic hepatic disease and malnutrition) may require monitoring of prothrombin time during Rocephin treatment Vitamin K administration (10 mg weekly) may be necessary if the prothrombin time is prolonged before or during therapy

Prolonged use of Rocephin may result in overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Rocephin should be prescribed with caution in individuals with a history of gastrointestinal disease, especially colitis

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY Carcinogenesis Considering the maximum duration of treatment and the class of the compound, carcinogenicity studies with ceftriaxone in animals have not been performed The maximum duration of animal toxicity studies was six months

Mutagenesis Genetic toxicology tests included the Ames test, a micronucleus test and a test for chromosomal aberrations in human lymphocytes cultured *in vitro* with ceftriaxone Ceftriaxone showed no potential for mutagenic activity in these studies

Impairment of Fertility Ceftriaxone produced no impairment of fertility when given intravenously to rats at daily doses up to 586 mg/kg/day approximately 20 times the recommended clinical dose of 2 gm/day

PREGNANCY Teratogenic Effects Pregnancy Category B Reproductive studies have been performed in mice and rats at doses up to 20 times the usual human dose and have no evidence of embryotoxicity, fetotoxicity or teratogenicity In primates, no embryotoxicity or teratogenicity was demonstrated at a dose approximately three times the human dose

There are, however no adequate and well-controlled studies in pregnant women Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nonteratogenic Effects In rats, in the Segment I (fertility and general reproduction) and Segment III (perinatal and postnatal) studies with intravenously administered ceftriaxone, no adverse effects were noted on various reproductive parameters during gestation and lactation, including postnatal growth, functional behavior and reproductive ability of the offspring, at doses of 586 mg/kg/day or less

NURSING MOTHERS Low concentrations of ceftriaxone are excreted in human milk Caution should be exercised when Rocephin is administered to a nursing woman

PEDIATRIC USE Safety and effectiveness of Rocephin in neonates, infants and children have been established for the dosages described in the Dosage and Administration section

ADVERSE REACTIONS: Rocephin is generally well tolerated In clinical trials, the following adverse reactions, which were considered to be related to Rocephin therapy or of uncertain etiology, were observed

LOCAL REACTIONS—pain, induration or tenderness at the site of injection (1%) Less frequently reported (less than 1%) was phlebitis after I V administration

HYPERSENSITIVITY—rash (1 7%) Less frequently reported (less than 1%) were pruritus, fever or chills

HEMATOLOGIC—eosinophilia (6%), thrombocytosis (5 1%) and leukopenia (2 1%) Less frequently reported (less than 1%) were anemia, neutropenia, lymphopenia, thrombocytopenia and prolongation of the prothrombin time

GASTROINTESTINAL—diarrhea (2 7%) Less frequently reported (less than 1%) were nausea or vomiting, and dysgeusia

HEPATIC—elevations of SGOT (3 1%) or SGPT (3 3%) Less frequently reported (less than 1%) were elevations of alkaline phosphatase and bilirubin

RENAL—elevations of the BUN (1 2%) Less frequently reported (less than 1%) were elevations of creatinine and the presence of casts in the urine

CENTRAL NERVOUS SYSTEM—headache or dizziness were reported occasionally (less than 1%)

GENITOURINARY—moniliasis or vaginitis were reported occasionally (less than 1%)

MISCELLANEOUS—diaphoresis and flushing were reported occasionally (less than 1%)

Other rarely observed adverse reactions (less than 01%) include leukocytosis, lymphocytosis, monocytosis, basophilia, a decrease in the prothrombin time, jaundice, glycosuria, hematuria, bronchospasm, serum sickness, abdominal pain, colitis, flatulence, dyspepsia, palpitations and epistaxis

DOSAGE AND ADMINISTRATION: Rocephin may be administered intravenously or intramuscularly The usual adult daily dose is 1 to 2 gm given once a day (or in equally divided doses twice a day) depending on the type and severity of the infection The total daily dose should not exceed 4 grams

For the treatment of serious miscellaneous infections in children, other than meningitis, the recommended total daily dose is 50 to 75 mg/kg (not to exceed 2 grams), given in divided doses every 12 hours Generally, Rocephin therapy should be continued for at least two days after the signs and symptoms of infection have disappeared The usual duration is 4 to 14 days, in complicated infections longer therapy may be required

In the treatment of meningitis, a daily dose of 100 mg/kg (not to exceed 4 grams), given in divided doses every 12 hours, should be administered with or without a loading dose of 75 mg/kg

For the treatment of uncomplicated gonococcal infections, a single intramuscular dose of 250 mg is recommended

For preoperative use (surgical prophylaxis), a single dose of 1 gm administered ½ to 2 hours before surgery is recommended

When treating infections caused by *Streptococcus pyogenes*, therapy should be continued for at least ten days

No dosage adjustment is necessary for patients with impairment of renal or hepatic function, however, blood levels should be monitored in patients with severe renal impairment (e g, dialysis patients) and in patients with both renal and hepatic dysfunctions

HOW SUPPLIED: Rocephin (ceftriaxone sodium/Roche) is supplied as a sterile crystalline powder in glass vials and piggyback bottles The following packages are available

Vials containing 250 mg equivalent of ceftriaxone Boxes of 10 (NDC 0004-1962-01)
Vials containing 500 mg equivalent of ceftriaxone Boxes of 10 (NDC 0004-1963-01)
Vials containing 1 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004-1964-01)
Piggyback bottles containing 1 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004-1964-03)
Vials containing 2 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004-1965-01)
Piggyback bottles containing 2 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004-1965-03)
Bulk pharmacy containers, containing 10 gm equivalent of ceftriaxone Boxes of 1 (NDC 0004-1971-01)
NOT FOR DIRECT ADMINISTRATION

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ROCHE®

References:

1. Data on file, Hoffmann-La Roche Inc.
2. Patel IH, Kaplan SA. *Am J Med* 77:17-25, Oct 19, 1984.
3. Richards DM, *et al: Drugs* 27:469-527, 1984
4. Cleeland R, Squires E: *Am J Med* 77:3-11, Oct 19, 1984.
5. Tanner DJ, Nazarian MQ *Am J Med* 77:104-111, Oct 19, 1984.

Houston: A vibrant backdrop for TMA's 120th Annual Session

Houston, the nation's fourth largest city, will provide a vibrant backdrop to Texas Medical Association's 120th Annual Session, May 13–17, 1987. The city embodies the Texas spirit—daring, bold, progressive. Host city and program information booths will be located in the East Hall of the Albert Thomas Convention Center to assist registrants with information on the city's entertainment and dining and TMA's scientific programming. Following is a preview.

Home to the Texas Medical Center, the largest collection of medical institutions in the world, Houston is an appropriate setting for a meeting that is expected to draw thousands of health care professionals—the Texas Medical Association's 120th Annual Session, May 13–17. More than 40 years old, the medical center is Houston's largest employer with approximately 47,000 full- and part-time employees; 10,000 faculty members; 10,000 students; and more than 7,000 volunteer workers.

The medical center is one of many monuments to scientific and technical achievement that attract visitors to Houston. All of them provide opportunities for exploration during annual session registrants' visit to Houston: the Lyndon B. Johnson Space Center, Museum of Natural Science, Port of Houston, and Burke Baker Planetarium.

But, futuristic Houstonians have not forgotten their heritage. The 570-foot San Jacinto Monument, the tallest masonry monument in the world, overlooks the battleground where Sam Houston's small army defeated Santa Anna's Mexican troops to gain independence for the state. Also at the site are the San Jacinto Museum of Regional History and the *USS Texas*, the veteran of two World Wars and flagship of the Texas Navy.

Sam Houston Park takes visitors to the Houston of the 1800s. The park contains restored homes of famous families, an old German colony church, an outdoor bandstand, and the Long Row, a replica of Houston's first commercial properties, including a general store, library, fancy shop, barbershop, and town hall.

Culturally astute, Houston is a respected part of the arts community. The Museum of Fine Arts and the Contemporary Arts Museum house works that appeal to every variety of art enthusiast. The city's ballet and opera companies and symphony and the nationally recognized Nina Vance Alley Theatre reflect firmly rooted support of the performing arts.

Just for fun, Houston presents Astroworld/Six Flags, featuring 11 theme parks that cover 75 acres, with more than 100 shows, restaurants, and rides. The Hermann Park Zoo and Hanna Barbera Land, built around Hanna and Barbera's famous cartoon characters—Scooby Doo, Yogi Bear, and the Smurfs, to mention a few—also are high on the fun list. Shopping centers offer treasures from around the world. Everything from famous department stores to unique shops are found in a variety of settings—everything from the renowned and spectacular Galleria to

The Houston skyline reflects a bold Texas spirit.

quaint, Old World specialty shops to El Mercado del Sol, a Hispanic theme retail center covering almost 17 acres on Buffalo Bayou.

Reflecting the city's personality as a major international seaport, Houston offers epicurean delights from every corner of the world. Not the least popular of these are steak houses and barbeque and Mexican restaurants. With more than 8,000 restaurants from which to select, there's something for almost everyone.

When TMA's annual session gets underway at the Albert Thomas Convention and Exhibit Center, the city will have yet another attraction, which will draw physicians and health professionals from around the state. The selection of the convention center as the hub of the session allows the convenience of presenting many session activities—scientific sessions, House of Delegates, and some 250 scientific and technical exhibits—in one location. Shuttle buses will be available to transport registrants from area hotels to the center. The Committee on General Arrangements for Annual Session, chaired by Mary W. Geda, MD, Houston, will add the perfect host's touches. Subcommittee members are minding the details of alumni and fraternity functions, entertainment, public lectures, publicity, sports events, registration, and first aid. In that vein, Dr Geda reports that air and ground ambulances will be on hand, "even though there are so many doctors around."

J. Forrest Fitch, MD, McAllen, chairman of TMA's Council on Annual Session and Scientific Programming, promises a "smorgasbord of learning opportunities." Headlining the scientific sessions are experts from around the state and the nation. Together, they will present approximately 300 hours of programming, which will cover a multitude of medical specialty areas. Dr Fitch notes that each scientific section has recruited excellent speakers, and, "We'll do what we always do—give everyone an opportunity to get an update on the most recent advances in medicine."

There is no registration fee for TMA members attending the scientific programs, most of which qualify for credit under Category 1 of the American Medical Association Physician's Recognition Award and in the elective category of the American Academy of Family Physicians.

Two general meeting luncheons will feature speakers of interest to a cross-section of physicians. Friday, May 15, John J. Coury, Jr, MD, president of the American Medical Association, will discuss "Challenges of American Medicine." Astronaut Rhea Seddon, MD, Houston, will share her experiences in space during the Saturday, May 16, luncheon.

On the business side, the annual session is the setting for meetings of the House of Delegates and reference committee hearings. The house convenes in the convention center Thursday, May 14, and again Friday, May 15. Boards, councils, and committees will meet at the Hyatt Regency Houston.

The session also offers opportunities for golfers, tennis players, and runners to display their skills and talents. Golf and tennis tournaments begin the Wednesday before the session, and a noncompetitive fun run is scheduled for Saturday, May 16.

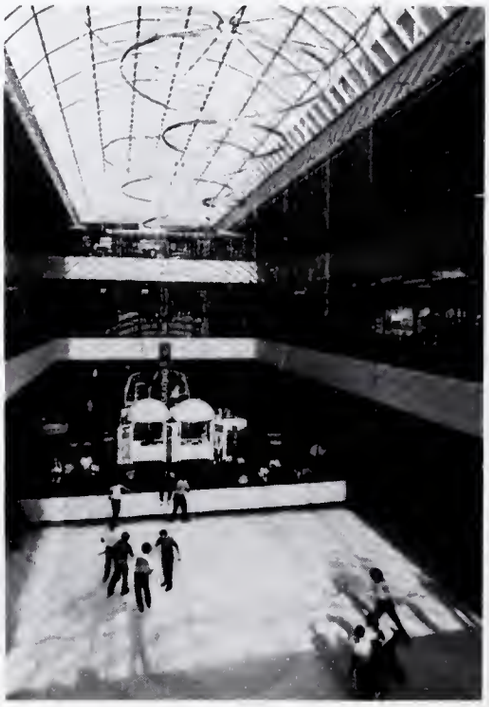
Registrants will want to relax and enjoy the company of their colleagues during the Friday night social event, which features the Four Freshmen, a popular vocal and instrumental quartet whose repertoire includes "It's a Blue World," "Graduation Day," "How Can I Tell Her," and "Day by Day." The BoJangles Band, led by Bob Flanigan, will provide music for dancing, and as an added bonus, comedian Gary Bun Richardson will entertain the audience. The Imperial Ballroom of the Hyatt Regency is the scene of the party. Proceeds from the social event benefit the Auxiliary Student Loan Fund.

Meeting in conjunction with the TMA, the association's auxiliary will present a program following the progressive theme "From This Moment On." Texas' First Lady Rita Clements will speak during a luncheon Friday, May 15. In addition to business meetings, auxiliary members may choose from a wide array of special tours, seminars, cooking demonstrations, and dining opportunities.

In short, Houston and annual session are an unbeatable combination. Plan to be there!

The San Jacinto monument towers above the battleground where Texans fought for independence from Mexico.

The ice rink at the Galleria shopping center tempts skaters who visit Houston.



SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA · SUBCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

PHYSICIANS

We are announcing opportunities for you to serve your country as an Air Force Reserve physician/officer. You can make new professional associations, obtain CME credit and help support the Air Force mission. For those who qualify, retirement credit can be obtained as well as low cost life insurance. One weekend a month plus two weeks a year or less can bring you pride and satisfaction in serving your country.

Call: (512) 385-1816
Or Fill Out Coupon and Mail Today!

To: Health Professions Recruiting
2610 RRS/RSH
Bergstrom AFB, TX 78743-6002

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Prior Service? Yes ___ No ___

Medical Specialty _____ Date of Birth _____

AIR FORCE RESERVE 10-710-1084

A GREAT WAY TO SERVE

Is there a statute of limitations in a medical professional liability lawsuit?

A statute of limitations is a law that sets the time period within which a person must bring an action in court or forever be barred from bringing that action. Among the many purposes of statutes of limitations are to prevent prosecution of stale claims and to compel the settlement of claims within a reasonable time after their origin, while the evidence is still fresh in the minds of the parties or witnesses.

The question of whether there is a statute of limitations for a medical professional liability lawsuit is a question asked frequently by physicians who are rightfully concerned as to the length of time they are exposed to claims of negligence. The answer to their question is a qualified "Yes." There is a specific statute of limitations on the books, but as a result of judicial interpretation, its provisions are not enforced, leaving physicians to wonder, "Is there a statute of limitations in a medical professional liability lawsuit?"

Before June 3, 1975, an adult plaintiff who sued a physician for negligence had two years from the alleged negligent act to bring suit. This two-year statute of limitations applied not only to medical professional liability actions but also to causes that were a result of any type of negligence (1).

However, the courts had carved out an exception to the two-year statute of limitations by adopting the "discovery rule." The discovery rule provides that the limitations period does not begin to run until the injured party actually discovers, or with the exercise of reasonable diligence, should have discovered the injury. The courts applied the discovery rule to situations where foreign objects were left in the body (2), vasectomies (3), fraudulent concealment (4), and radiation treatment (5). In essence, the discovery rule extended the statute of limitations in such a fashion that a physician's exposure to liability for negligent treatment was indefinitely extended because it was predicated on a patient's discovery of an injury. Such discovery could happen at any time in the future.

In the case of medical injuries to a minor, before 1975, the law provided that a minor had two years after he reached majority, in other words until he was 20, to bring a lawsuit (6).

The 64th Texas Legislature (1975) passed temporary legislation that changed the statute of limitations for professional liability actions against physicians who carried professional liability insurance coverge (7). Similar in purpose to current law, it attempted to abolish the discovery rule and shorten the time period within which minors could sue. This legislation expired in 1977 and was replaced that year by the current law, which states:

> Notwithstanding any other law, no health care liability claim may be commenced unless the action is filed within two years from the occurrence of the breach or tort or from the date the medical or health care treatment that is the subject of the claim or the hospitalization for which the claim is made is completed; provided that, minors under the age of 12 years shall have until their 14th birthday in which to file, or have filed on their behalf, the claim. Except as herein provided, this subchapter applies to all persons regardless of minority or other legal disability (8).

Once again, legislative intent was to abrogate the discovery rule by the above statute and to have in effect an absolute two-year statute of limitations, but this time for all physicians. The statute also had as its purpose to establish a statute of limitations that would be more reasonable than the law that allowed a minor to wait until age 20 to file suit.

Unfortunately, the courts' interpretations of the current law have reinstated, at least to some extent, the discovery rule and extended once again until their 20th birthday the time within which a minor may sue a physician for negligence.

How long does an adult plaintiff have to sue a physician?

In the case of *Neagle v Nelson* (9), Bobby Neagle filed an action against two physicians and two nurses alleging that a surgical sponge had been left in his abdomen during an appendectomy in which the defendants all had played a part. Each defendant urged the court to grant a summary judgment in their favor on the basis of the two-year statute of limitations because Neagle had not filed within two years of the operation. The trial court granted the defendants' summary judgment, and the court of appeals affirmed. However, the Texas Supreme Court ruled that barring Neagle's suit violated the open courts provision of the Texas Constitution (10) because it was impossible for Neagle to discover the sponge until more than two years after surgery. The court stated that the open courts provision protects Texas citizens from legislative acts that abridge an individual's right to sue before the individual has the opportunity to discover the wrong and bring suit.

The Neagle decision implied that the discovery rule was reinstated. If so, under previous court decisions, that would mean that the two-year statute of limitations would begin to run upon Neagle's discovery of the sponge. However, Texas Supreme Court Justice Kilgarlin's concurring opinion indicated, although the majority opinion did not, that the Neagle decision did not mean that Neagle had two years from the discovery of the sponge to sue. He stated that the legislative intent behind the 1977 act was to abolish the discovery rule and that the court could not reinstate a limitations period that would allow suits to be filed within two years after the date of discovery.

Justice Kilgarlin noted that the court had chosen not to discuss the length of time Neagle had in which to file suit after discovering the sponge. He asked the question, as readers of the decision did, "What is the permissible length of delay for a person like Neagle to sue after discovering an injury?" He suggested that the jury at the trial court level in cases like Neagle be asked the question whether the plaintiff prosecuted his suit with the degree of diligence that an ordinary prudent person would have exercised under the same or similar circum-

stances. Their response to this question would either allow or bar any recovery for the plaintiff.

Not until almost a year later in *Morrison v Chan* (11), did the court state affirmatively the discovery rule was abolished, and then without commenting on how long an individual like Neagle has to sue a physician for negligence after he discovers the injury.

In the Morrison case, the plaintiff Betty Gray sued Rafael C. Chan, MD, and others alleging their negligence resulted in a hole in her bladder. Betty Gray had received radium treatments for cervical cancer from Dr Chan. The treatments were completed in the middle of February 1980. In September 1980 Gray's urologist discovered a hole between Gray's bladder and vagina. Gray gave statutory notice of her claim in July 1982, which tolled the statute of limitations for 75 days, and then filed suit in October 1982. She later died, and Hannah Morrison, as administratrix of Gray's estate, was substituted as plaintiff.

Morrison urged the court to consider the date of discovery of the hole between Gray's bladder and vagina as the date from which the two-year statute of limitations runs rather then the end of Chan's treatment. The Texas Supreme Court affirmed the actions of the lower courts in barring Morrison's claim because of untimely filing. They rejected the plaintiff's argument that this case was similar to the Neagle case, therefore rejecting the argument that barring the suit would violate the open courts provision. The court distinguished the two cases on the fact it was not possible for Neagle to discover the injury within the two-year period, while Gray discovered her injury well within the two-year statute of limitations and had approximately 18 months within the limitations period to bring suit after the discovery of the injury. The court then affirmatively stated the discovery rule was abolished.

The court's statement in the Morrison decision that the discovery rule is abolished is somewhat confusing. Its holdings in Neagle and Morrison indicate:

1. If an individual "discovers" an injury within the two-year statute of limitations, no matter when during that two-year period, he or she must file suit within that two-year period or the action is barred.
2. However, if an individual "discovers" an injury after two years, he or she can file a suit without being barred by the two-year statute of limitations.

So if the discovery rule is abolished, as the court states, why is the second scenario allowed? At least if the discovery rule were acknowledged as existing doctrine, one would know individuals like Neagle would have two years from their discovery of an injury to file. With no comment from the court as to the length of time one has to sue in situations like the second scenario, one can only hope that the time is not limitless. However, no matter how the court may rule on how quickly an individual in Neagle's situation must sue, the time within which a patient may sue must appear limitless to a physician, because he will never know when a patient may "discover" an injury that a jury will consider to be the result of his negligence.

How long does a minor plaintiff have to sue a physician?

In *Sax v Votteler* (12), the parents of Lori Beth Sax filed an action against Dr T. P. Votteler alleging that he mistakenly removed one of Lori Beth's fallopian tubes, instead of her appendix, during an operation that occurred on May 10, 1976. The Saxes filed suit on Feb 20, 1979. At the time of Lori Beth's surgery and treatment, the temporary legislation enacted in 1975 regarding the time frame within which a minor must sue was in effect. The result of the legislation was that the trial court barred Lori Beth's cause of action, and the appeals court affirmed.

The Texas Supreme Court, however, determined that the temporary legislation violated the open courts provision of the Texas Constitution and was therefore unconstitutional. The court concluded that Lori Beth's right of redress outweighed the legislative intent of the temporary legislation. In so concluding, the court found that Lori Beth had a well-defined common law cause of action to sue for injuries negligently inflicted by others that was being restricted by the 1975 legislation.

Although the court agreed with Dr Votteler that the purpose and basis for limiting the time within which a minor may sue were legitimate, the court stated the legislation was unreasonable when weighed against the effective abrogation of a child's right to redress. If a child's parents failed to take timely action, the child would be precluded from asserting his or her particular portion of the claim, which is for physical pain and mental anguish, both past and future; disfigurement; loss of earning capacity after age 18; and any medical expenses that would in reasonable probability be incurred after the child's 18th birthday. Furthermore, a child would be precluded from suing his or her parents on account of their negligence, due to the doctrine of parent-child immunity. Thus the court concluded Lori Beth would be effectively barred from any remedy if her parents failed to file suit within the legal time limit.

However, the 1975 legislation was held to be unconstitutional only in regard to Lori Beth's claim. Lori Beth's parents' claim for medical costs incurred by Lori Beth until her 18th birthday, and any loss of earning capacity that Lori Beth sustained between the time of the injury and her 18th birthday, which are damages recoverable by parents of an injured child, was barred because the parents had allowed the statute of limitations to run on their claim.

The significance of the Sax decision is that the reasoning the court used to strike down the temporary legislation in regard to minors' claims can be applied in any challenge to the current law because the current law's purpose and effect are the same as those of the temporary legislation. Therefore, even though the current law in regard to the statute of limitations for a minor has not been declared unconstitutional, it is expected that it will be held unconstitutional if challenged. Thus, a physician is subject to a minor's claim until that minor reaches 20 years of age.

Conclusion

What amounts to the absence of a reasonable statute of limitations in medical professional liability lawsuits means that physicians may be subject to suits long after they have rendered the care that a patient may claim is negligent. Needless to say,

records of treatment substantiating the quality of care rendered may have been destroyed, memories may have faded, witnesses may have disappeared, and changes in laws by judicial interpretation that broaden liability may have occurred, placing the physician in an untenable position for defending himself.

A constitutional amendment is needed to alleviate this problem of long-term exposure to liability. The House/Senate Joint Committee on Liability Insurance and Tort Law and Procedure recognized this need in its report (13) to the 70th Legislature. The report recommended a Texas constitutional amendment that clearly would indicate that the judicial branch could not declare legislation, like statutes of limitations, unconstitutional. Until such an amendment is passed, physicians rightfully may wonder "Is there a statute of limitations in a medical professional liability lawsuit?"

HELENE A. ALT, JD
TMA Assistant General Counsel

REFERENCES

1. Tex Civ Prac & Rem Code Ann, sec 16.003 (Vernon 1986).
2. Gaddis v Smith, 417 SW2d 577 (Tex 1967).
3. Hays v Hall, 488 SW2d 412 (Tex 1973).
4. Nichols v Smith, 507 SW2d 518 (Tex 1974).
5. Grady v Faykus, 530 SW2d 151 (Tex Civ App-Corpus Christi 1975, writ ref'd nre).
6. Tex Civ Prac & Rem Code Ann, sec 16.001 (Vernon 1986).
7. Tex Ins Code Ann art 5.82, sec 4 (Professional Liability Insurance for Physicians, Podiatrists, and Hospitals Act, ch 330 sec 4, 1975 Tex Gen Laws Local & Spec 864, 865–866 *repealed* by Act of Aug 29, 1977, ch 817 sec 41.03, 1977 Tex Gen Laws 2039, 2064).
8. Tex Rev Civ Stat Ann art 4590i, sec 10.01 (Vernon Supp 1987).
9. Neagle v Nelson, 685 SW2d 11 (Tex 1985).
10. Tex Const art I, sec 13.
11. Morrison v Chan, 699 SW2d 205 (Tex 1985).
12. Sax v Votteler, 648 SW2d 661 (Tex 1983).
13. Texas House/Senate Joint Committee on Liability Insurance and Tort Law and Procedure, The Joint Committee Report to the 70th Legislature of the State of Texas (Jan 22, 1987).

A Referral Center for Cardiopulmonary Diseases

Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address:
P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS MEDICAL LIABILITY TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

V.C. Baird
Valliant Clinton Baird, MD, 82, a longtime Houston resident, died Dec 26, 1986. Dr Baird was professor of occupational medicine at The University of Texas School of Public Health at Houston, and clinical assistant professor of medicine and clinical associate professor of industrial medicine in the department of virology and epidemiology at Baylor College of Medicine.

A native of Coryell County, Texas, he was a 1928 graduate of Tulane University School of Medicine in New Orleans. After interning in New Orleans, Dr Baird became instructor at Tulane's School of Medicine. In 1931 he joined Standard Oil Company of Louisiana as assistant medical director. Dr Baird moved to Houston in 1935 when Humble Oil and Refining Company named him assistant chief physician. He served as medical director for the oil company from 1944 until his retirement in 1969.

Dr Baird served as president of the Texas Industrial Medical Association, vice president and treasurer of the Harris County Medical Society, president of the Medical Research Foundation of Texas, and director and medical advisor for the Houston Council on Alcoholism. Active in the Texas Medical Association, Dr Baird served as chairman of the Council on Industrial Health from 1955 until 1961.

He is survived by his wife, Mary Louise Burch Baird, and daughters, Brenda Baird Connelly and Mary Lou Baird, all of Houston; sister, Mae Belle Baird, California; and six grandchildren.

B.W. Brindley
Bethea Wright Brindley, MD, an Austin radiologist, died Dec 20, 1986. He was 50.

Dr Brindley was born in Cameron, Tex, and attended The University of Texas at Austin. In 1963 he graduated from The University of Texas Medical Branch at Galveston. After an internship at Hermann Hospital in Houston and a residency at UT Medical Branch at Galveston, Dr Brindley began a private practice of radiology in Austin.

He is survived by his wife, Mary Ellen Brindley; sons, Robert Lane Brindley and Mark Kennedy Brindley; and daughter, Elizabeth Ellen Brindley, all of Austin; stepmother, Mrs Cecile Brindley, Borger, Tex; brothers, Paul C. Brindley, MD, Houston, and Mace L. Brindley, MD, Waco.

S.R. Brown
Samuel Roland Brown, MD, an honorary member of Texas Medical Association, died Dec 8, 1986, at age 73.

Dr Brown was born in Tenaha, Tex, and attended The University of Texas at Austin. In 1937 he received his medical degree from Baylor College of Medicine in Dallas. After an internship at St Margaret's Hospital in Hammond, Ind, Dr Brown returned to Dallas for a residency at Medical Arts Hospital.

A family physician, Dr Brown practiced in Dallas from 1939 to 1979. He was a past president of the Texas Academy of Family Physicians.

Surviving family members include his wife, Sue Brown, Dallas; sons, Michael Brown, New Mexico, and Patrick Brown, Fort Worth, Tex; daughter, Penny Evans, Oklahoma; sisters, Edith King, Dallas, and Mary Jackson, Wichita Falls, Tex; brother, Pat Brown, Wichita Falls; stepdaughter, Shirley Kilgore, Dallas; three grandchildren; and five step-grandchildren.

F.Y. Kuhlman
Frederick Y. Kuhlman, MD, a Port Arthur radiologist, died Sept 27, 1986.

Dr Kuhlman, 85, was born in Oklahoma and was a 1926 graduate of the University of Kansas School of Medicine at Lawrence, Kan. After an internship in Kansas City, Mo, he moved to Texarkana for a residency. He returned to Kansas City and practiced radiology there until 1936, when he moved to Springfield, Ill. In 1941, Dr Kuhlman moved to Port Arthur, where he practiced until his retirement in 1975.

Surviving family members include his wife, Louise Kuhlman, Jasper, Tex; daughters, Joan Kuhlman Richardson and Gerry DuBose; and five grandchildren.

J.D. Munsell
John D. Munsell, MD, Temple, died Dec 3, 1986, at age 75. Dr Munsell was a general practitioner in Milford, Tex, before joining the staff of the Veterans Administration Hospital in Marlin, Tex, in 1968. He retired from the practice of medicine in 1977.

Dr Munsell was a native of Natoma, Kan. He received BS and MS degrees from the University of Nebraska in Lincoln, and in 1934 received his medical degree from the University of Nebraska College of Medicine in Omaha. His internship was at Methodist Hospital in Omaha. Dr Munsell practiced in Kansas and in Texas at Odessa, Pasadena, and Abilene, before moving to Milford in 1960.

He is survived by his wife, Olna Jo Munsell, Temple, Tex.

A. Ritch
Allen Ritch, MD, a San Antonio surgeon and honorary member of Texas Medical Association, died Dec 16, 1986. He was 85.

Dr Ritch was born in Whitewright, Tex, and received his premedical education at East Texas State University and The University of Texas at Austin. He graduated from The University of Texas Medical Branch in 1924 and then interned at Santa Rosa Hospital in San Antonio. He remained in San Antonio to begin a practice of general surgery.

A member of the US Army, Dr Ritch served in the medical reserve during 1926–1946, and served active duty as a major during 1941–1945.

Dr Ritch is survived by his wife, Nell Ritch, San Antonio; daughters, Barbara R. Burns and Ella Jane Ritch, both of San Antonio, and Rozanne R. Seelen, New York City; five grandchildren; and two great-grandchildren.

W.G. Youens, Jr
Willis G. Youens, Jr, MD, a family physician in Weimar, Tex, for 35 years, died Dec 13, 1986. He was 68.

Dr Youens was born in Columbus, Tex, and attended The University of Texas at Austin, receiving a bachelor of science degree. In 1942 he received his medical degree from The University of Texas Medical Branch at Galveston. His intern-

ship was at Kansas City (Mo) General Hospital in 1943.

Dr Youens served as a captain in the US Army from February 1944 until September 1946, and then practiced medicine in Hallettsville, Tex, for one year. He joined his brother, W.T. Youens, MD, in the practice of medicine in Weimar. In 1949 they founded Youens Hopsital, now called the Colorado-Fayette Medical Center. Dr Youens served as chief of the hospital's medical staff for many years. During 1947–1954 he was company surgeon for Southern Pacific Railroad. In 1979, Dr Youens' son Robert joined him in his practice at the Youens Clinic.

Active in the Texas Medical Association, Dr Youens served as a delegate from the Colorado-Fayette County Medical Society and as president and secretary of the county medical society.

Dr Youens was active in community affairs. For 32 years he served as city health officer for Weimar, and in 1969 was on the advisory committee of the Weimar-Columbus School of Vocational Nursing.

Surviving family members include his wife, Ruth Vance Youens, Weimar; daughter, Willa Jepson, Houston; sons, Vance Youens, Austin, Tex; James Youens, Corpus Christi, Tex; and Robert Youens, MD, Weimar; sister, Mary Elizabeth Hopkins, Columbus; and eight grandchildren.

G.W. Zeluff

George W. Zeluff, MD, a Houston internist, died Nov 24, 1986. Dr Zeluff, 69, was a clinical professor of medicine and chief of internal medicine at Baylor College of Medicine and associate chief of medicine at Methodist Hospital.

He was born in New York City and attended Dartmouth College in New Hampshire. In 1941 he received his medical degree from Columbia University College of Physicians and Surgeons in New York. After an internship and residency at Bellevue Hospital in New York, Dr Zeluff began his medical practice in Houston in 1950. During 1942–1946, he served in the US Navy.

Surviving family members include his wife, Catherine Zeluff; son, Barry J. Zeluff, MD; and daughter, Lauris Zeluff, all of Houston; and five grandchildren.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

V. C. BAIRD
Houston, 1904–1986

B. W. BRINDLEY
Austin, 1936–1986

S. R. BROWN
Dallas, 1913–1986

F. Y. KUHLMAN
Port Arthur, 1900–1986

J. D. MUNSELL
Milford, 1910–1986

A. RITCH
San Antonio, 1901–1986

W. G. YOUENS, JR
Weimar, 1918–1986

G. W. ZELUFF
Houston, 1917–1986

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audio-visual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student	$ 5.00	☐ Patron	$ 100.00
☐ Sustaining	$15.00	☐ Life	$1,000.00
☐ Subscribing	$25.00		

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH

INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Robert S. McFadden, MD
Daniel E. Whitman, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
Eugene M. Hoyt, MD
James V. Ryan, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Berini RY, Kahn E (eds): *Clinical Genetics Handbook.* Oradell, NJ, Medical Economics Books, 1987.

Bloch RF, Basbaum M (eds): *Management of Spinal Cord Injuries.* Baltimore, Williams & Wilkins, 1986.

Brandenburg RO, Fuster V, Giuliani ER, et al (eds): *Cardiology: Fundamentals and Practice.* Chicago, Year Book Medical Publishers, Inc, 1987.

Brownell KD, Foreyt JP (eds): *Handbook of Eating Disorders. Physiology, Psychology, and Treatment of Obesity, Anorexia, and Bulimia.* New York, Basic Books, Inc, 1986.

Camins MB, O'Leary PF (eds): *The Lumbar Spine.* New York, Raven Press, 1987.

Cole HM, Lundberg GD (eds): *AIDS: From the Beginning.* Chicago, American Medical Association, 1986.

Crenshaw AH (ed): *Campbell's Operative Orthopaedics* (4 vols), ed 7. St Louis, The C.V. Mosby Company, 1987.

Dermatology in General Medicine (2 vols). New York, McGraw-Hill Company, 1987.

Dubler NN (ed): *Standards for Health Services in Correctional Institutions.* Washington, DC, American Public Health Association, 1986.

Fielding JWL, Priestman TJ: *Gastrointestinal Oncology.* Philadelphia, Lea & Febiger, 1986.

Fischer PM, Addison LA, Curtis P, et al: *The Office Laboratory.* Norwalk, Conn, Appleton-Century-Crofts, 1983.

Furman S, Hayes DL, Holmes DR Jr: *A Practice of Cardiac Pacing.* Mount Kisco, NY, Futura Publishing Company, Inc, 1986.

Goldfield N, Goldsmith SB (eds): *Alternative Delivery Systems.* Rockville, Md, Aspen Publishers, Inc, 1987.

Howard JM, Jordan GL Jr, Reber HA: *Surgical Diseases of the Pancreas.* Philadelphia, Lea & Febiger, 1987.

Ingbar SH, Braverman LE (eds): *Werner's The Thyroid. A Fundamental and Clinical Text,* ed 5. Philadelphia, J.B. Lippincott Company, 1986.

Ledger WJ: *Infection in the Female,* ed 2. Philadelphia, Lea & Febiger, 1986.

Lorenzani SS: *Candida: A Twentieth Century Disease.* New Canaan, Conn, Keats Publishing, Inc, 1986.

MacFarlane K, Waterman J: *Sexual Abuse of Young Children. Evaluation and Treatment.* New York, The Guilford Press, 1986.

Marshall CW: *Vitamins and Minerals: Help or Harm?* Philadelphia, George F. Stickley Company, 1986.

Mishell DR Jr: *Menopause: Physiology and Pharmacology.* Chicago, Year Book Medical Publishers, Inc, 1987.

Orell SR, Sterrett GF, Walters MN, et al: *Manual and Atlas of Fine Needle Aspiration Cytology.* New York, Churchill Livingstone, 1986.

Rubin P (ed): *Clinical Oncology. A Multidisciplinary Approach,* ed 6. American Cancer Society, 1983.

Sauerbrei EE, Nguyen KT, Nolan RL: *A Practical Guide to Ultrasound in Obstetrics and Gynecology.* New York, Raven Press, 1987.

Sheps DS: *The Management of Post-Myocardial Infarction Patients.* New York, McGraw-Hill Book Company, 1987.

Shields MB: *Textbook of Glaucoma,* ed 2. Baltimore, Williams & Wilkins, 1987.

Siegel IM: *Muscle and its Diseases. An Outline Primer of Basic Science and Clinical Method.* Chicago, Year Book Medical Publishers, Inc, 1986.

Strauss RH (ed): *Drugs & Performance in Sports.* Philadelphia, W.B. Saunders Company, 1987.

Sundt TM Jr: *Occlusive Cerebrovascular Disease. Diagnosis and Surgical Management.* Philadelphia, W.B. Saunders Company, 1987.

Tilkian AG, Daily EK: *Cardiovascular Procedures. Diagnostic Techniques and Therapeutic Procedures.* St Louis, The C.V. Mosby Company, 1986.

Young SH, Rubin JM, Daman HR (eds): *Psychobiological Aspects of Allergic Disorders.* New York, Praeger Publishers, 1986.

Motrin® 800 mg TABLETS
ibuprofen

Extra strength
Convenience
Economy

Upjohn
A Century of Caring
1886·1986

986 The Upjohn Company

J-6138 January 1986

There's never been a better time for her and PREMARIN®
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.[1-4] The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.[5]

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms

PREMARIN®
(Conjugated Estrogens Tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(Conjugated Estrogens)

Vaginal Cream

0.625mg/g

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) **Osteoporosis (abnormally low bone mass).** Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria, edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate to severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically:* Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Whitehead MI, Townsend PT, Pryse-Davies J, et al: Effects of estrogens and progestins on the biochemistry and morphology of the postmenopausal endometrium. *N Engl J Med* 1981;305:1599-1605. **2.** Paterson MEL, Wade-Evans T, Sturdee DW, et al: Endometrial disease after treatment with oestrogens and progestogens in the climacteric. *Br Med J* 1980;280:822-824. **3.** Magos AL, Brincat M, Studd JWW, et al: Amenorrhea and endometrial atrophy with continuous oral estrogen and progestogen therapy in postmenopausal women. *Obstet Gynecol* 1985; 67: 496-499. **4.** Whitehead MI, Lane G, Siddle N, et al: Avoidance of endometrial hyperstimulation in estrogen-treated postmenopausal women. *Semin Reprod Endocrinol* 1983;1:1;41-52. **5.** Barnes RB, Roy S, Lobo RA: Comparison of lipid and androgen levels after conjugated estrogen or depo-medroxyprogesterone acetate treatment in postmenopausal women. *Obstet Gynecol* 1985;66:216-219.

© 1986 Ayerst Laboratories

Ayerst® AYERST LABORATORIES
New York, NY 10017

T6194/886

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

A. J. LANIER, JR, MD
Diplomate American Board of Anesthesiology
Cervical, thoracic, and lumbar epidural steroid injection, cervical sympathetic, celiac plexus, and lumbar sympathetic blocks, differential spinal and neurolytic nerve blocks.

8350 Meadow Road, #250, Dallas, Texas 75231; 214 691-6885

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7558

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
Colon and Rectal Surgery Colonoscopy
Laser Hemorrhoidectomy, Out-patient or In-patient

Barnett Tower, Baylor Medical Plaza, 3600 Gaston Avenue, Suite 411, Dallas, Texas 75246; 214 821-4300, 350-2441
122 W. Colorado, Dallas, Texas 75208; 214 942-8734

Representing the Profession

. . . Another service of your association

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism

Practice Limited to Endocrinology & Diabetes
5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service
. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery
DAVID J. ZEHR, MD—Microsurgery
ARNOLD V. DiBELLA, MD
Hand Surgery and
Upper Extremity Reconstructive Surgery
3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA

Diplomates American Board of Orthopaedic Surgery
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops
. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery
JACINTO ZAMBRANO, MD
Surgery of the Hand
30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA
Surgery of the Hand
803 West Terrell, Fort Worth, Texas 76104
Telephone 817 B77-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3B00 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite B116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue,
Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA
Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD
920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery
Charles W. Simpson, MD
Morris Sanders, MD
W. Robert Hudgins, MD
Richard H. Jackson, MD
Mark J. Cwikla, MD
Casey E. Patterson, MD (Retired)
5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420
8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905;
Dallas, Texas 75231; 214 369-7596
1302 Lane St., Copper Tree Medical Center, Suite 300,
Irving, Texas 75062; 214 259-4768

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA
Diplomates of the American Board of Neurological Surgery
1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

TMA HealthWise Series
. . . Another service of your association

ARLINGTON ASSOCIATION OF
NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 77054
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77030
Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology
Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM
Practice Limited to Nuclear Medicine
100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540
Diplomate American Board of Nuclear Medicine

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES
Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD
Diseases and Surgery of the Retina and Vitreous
7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or B00 872-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 B21-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD
Diseases & Surgery of the Vitreous and Retina
2811 Lemmon Ave. E, Dallas, Texas 75204
214 521-1153; 1-800-442-5376

STUART A. TERRY, MD
Sub-Specialty Glaucoma
M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 78205; 512 226-5191

TMA Action monthly newsletter
. . . Another service of your association

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-800-833-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS

Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD

John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas 77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002; 713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas 77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030; 713 797-1777

Heights Medical Eye Center, 535 West 20th Street, Houston, Texas 77008; 713 862-6631

BRAZOSPORT EYE INSTITUTE

Frank J. Grady, MD, PhD, FACS

Surgical Correction of Nearsightedness and Astigmatism

103 Parking Way, Lake Jackson, Texas 77566; 1-800-392-0091

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD

William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Shubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery

A Professional Association

2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

TMA Physicians Benevolent Fund
. . . Another service of your association

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA
ENT, ENT Allergy, Cosmetic Facial Surgery
R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS
Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES
Dorothy Patras, MD
Anatomic Pathology and Consultation in Clinical Pathology
1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.
J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.
P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade
David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography
102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES
Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD
Aesthetic, Plastic, Reconstructive and Hand Surgery
6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

TMA Memorial Library
. . . Another service of your association

FORT WORTH PLASTIC SURGERY CLINIC
David A. Grant, MD, FACS
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Aesthetic and Reconstructive Plastic Surgery
Raymond A. Faires, MD
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Larry E. Reaves, MD
Diplomate American Board of Surgery
Plastic and Reconstructive Surgery
Hand and Micro Surgery
606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

VALENTIN GRACIA, MD, FACS, FICS
Diplomate American Board of Plastic Surgery
Aesthetic Surgery—Burns
1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

WILLIAM E. BARNES, MD
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery
1301 West 38th Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD
Plastic and Reconstructive Surgery
Surgery of the Hand
3601 21st Street, Suite 5, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery
825 Medical Drive, Tyler, Texas 75705; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN
Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery
Jacinto Zambrano, MD
Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery
30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.
John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES
302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD
Plastic, Reconstructive, Hand
and Microvascular Surgery
1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD

Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS

Excellence in Form & Function

Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 558-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

PSYCHIATRY

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child, Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 381-7181

Representing TMA's legislative views

. . . Another service of your association

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

TMA 1987 Calendar of Events

Annual Session, Houston, May 13-17

Fall Conference, Austin, September 26

Interim Session, Austin, November 20-21

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS
Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue, Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

REGIONAL CARDIOVASCULAR CENTER
Cardiac, Vascular and Thoracic Surgery
Mario O. Kapusta, MD
Phillip R. Adams, MD
925 E. Dawson, Tyler, Texas 75701
214 593-9022

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology
Urology—Adult and Pediatric
3600 Gaston Avenue, Baylor Medical Center Plaza, Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

TMA Physician Membership Directory

. . . Another service of your association

KIRBY B. TARRY, MD, FACS
Diplomate, American Board of Urology
Adult and Pediatric Urology
Impotence with Prosthesis-Vasovasostomy
1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES
Adult and Pediatric Urology
Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD
Diplomates of American Board of Urology
221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

DON'T LIGHT UP.
CALL UP.
If you're ready to stop smoking, the Cancer Information Service is ready to start helping.
Just call, toll-free...
1-800-4-CANCER
CANCER INFORMATION SERVICE
The University of Texas M. D. Anderson Hospital

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Wanted—Dallas metro area physicians who have a Texas license to help with pre-enlistment physicals. Full-time pays $36,889 to $45,367 with Government benefits. Part-time pays daily rate of $125 for morning work. 214 767-5211 or 5212.

West Texas—Big Spring State Hospital. Psychiatrist, child psychiatrist and general physician positions available, board certified or eligible. Texas license required. JCAH fully accredited facility. Excellent benefit package including 40-hour work week, malpractice protection, retirement, and tax-sheltered income program. Beautiful, friendly sunbelt location. City of 25,000 with good schools and excellent housing. Contact Superintendent, Big Spring State Hospital, P.O. Box 231, Big Spring, Texas 79721-0231; 915 267-8216. An EO/AAE.

Two Psychiatrists and One General Physician—Openings for staff psychiatrists in largely geropsychiatric, JCAH and Medicare accredited hospital and for director, 27 bed, Substance Abuse Unit. Will consider a general physician for Substance Abuse Unit if knowledge and experience satisfactory. Total salary for psychiatrists up to $72,304 and up to $65,000 for general physicians, depending on qualifications. Total patient population from 430 to 450. 19-member medical staff includes nine psychiatrists and two neurologists. Excellent location in the Texas Hill Country, one hour from San Antonio. Good fringe benefits. Must have Texas license. Call or write G. W. Harrelson, Jr., MD, Director of Psychiatric Services, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78029-1468; 512 896-2211. We are an equal opportunity employer.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas, Nacogdoches—Directorship and full-time EM opportunities available in 184-bed hospital with approximately 15,000 annual visits. Location in the Piney Woods just minutes away from one of the prettiest lakes and national forest in east Texas. Director must be board eligible. $100,000+ compensation and professional liability insurance procured on your behalf. Send CV to Lori Jordan, Coastal Emergency Services, Inc., 1425 Greenway Dr., Suite 450, Irving, Texas 75038 or call 214 258-5038.

Texas—209-bed hospital in Paris seeking full-time emergency department physician. Annual outpatient visits is 10,000. Paris is located approximately 100 miles north of Dallas and is an easy drive to the metroplex area. Attractive compensation. Send CV to Lori Jordan, Coastal Emergency Services, Inc., 1425 Greenway Dr., Suite 450, Irving, Texas 75038 or call collect 214 258-5038.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Attention Gen/FP (including those with semi-retirement thoughts). Practice opportunity available on beautiful Lake Whitney located in Central Texas. Office space (new) and personnel furnished for up to one year. This offer is well suited for any level of practice so desired. Immediate area affords excellent deer, duck, dove and quail hunting. Good fishing and water recreation at front door. Reply in confidence to P.O. Box 458, Whitney, Texas 76692.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Near Dallas—FP group seeks full time associate for satellite office in underserved area (within 15 minutes of hospital). Urgent need for family physician. OB preferred. Modern, 150-bed hospital. Shared call. Very lucrative practice potential; generous incentive package. Excellent lifestyle. Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Lucrative private practice within one hour of San Antonio. Modern hospital, new professional office building adjacent to hospital. No evening or weekend ER call required. Share call with young, BC family physician. OB required. Hunting mecca. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Within one hour of Austin. Young, board certified family physicians seek associate for fee-for-service group practice in young, progressive community of 5,600. Modern hospital. Excellent, award-winning schools; organized sports; strong industry. Competitive incentive package. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Family Physician, BC/BE—Recruiting physicians interested in permanent and professionally stimulating unique family practice group. Excellent salary and generous benefits. Eligibility for partnership/shareholding after one year. Extensive support system and modern facilities. An opportunity to practice free of business worries. Locational opportunities and medical center nearby. Send CV to Park Avenue Private Physicians, Inc., P.O. Box 441292, Houston, Texas 77244; 713 668-4600.

Excellent opportunity to establish busy practice by replacing a retiring physician. Fully equipped general practice and minor emergency clinic established 14 years in Northeast Texas. Family practitioner BC or BE. Contact P.O. Box 234, Cleveland, Texas 77328-0234.

Family physician needed to work for another physician in Pasadena, Texas to provide medical services to patients including pediatrics, OBG, minor surgery, geriatrics and internal medicine. Comprehensive medical services for members of family on continuing basis. Examine patients; elicit and record information about patients' health, order or execute various tests and x-rays on patients' condition. Analyze, report and diagnose condition, administer treatments and medications. Vaccinate patients to immunize them from communicative disease. Refer patients to specialists when necessary. Salary $50,000 per year; 40 hours per week. Apply at the Texas Employment Commission, Pasadena, Texas or send resume to Texas Employment Commission, TEC Building, Austin, Texas 78778, JO #4640026. Ad paid for by an equal employment opportunity employer.

Practice family medicine with the people in rural Iowa communities where the quality of life is superb. Solo and group practice opportunities available including guaranteed salaries and full benefit packages. For an immediate response please call 1-800-247-3121, ext. 8204 (USA).

Solo Family Practice—Central Texas small town living, large drawing area, excellent facilities. Spacious clinic includes private office/library, waiting room, bookkeeping office, three treatment rooms, emergency area, x-ray, lab area, furnishings. Good schools, large lake and golf nearby. Close to major towns, cultural events, colleges. Contact Katherine Sohns, 915 Genova, Sugar Land, Texas 77478; 713 242-5584, 713 757-8289.

Internal Medicine

Internist, board certified or eligible, needed for thriving private practice, in Lawton, OK, the mountain city. Guaranteed, more than competitive, salary leading to a possible partnership for the right doctor. We encourage all doctors, female and male, who want to practice good, aggressive, preventative medicine to apply for this prime position. Please send CV to Park Ridge Professional Center, 1303 S.W. Park Ridge Blvd., Suite 8, Lawton, Oklahoma 73505.

General internists seek BE/BC associate for established, fee-for-service private practice in medium-sized community near Dallas/Fort Worth. Gastroenterology or pumonary subspecialty desirable. Excellent lifestyle in area with strong, diversified economy. Incentive package available. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Internal Medicine—Texas Tech University Health Sciences Center seeks a faculty member for its general internal medicine division. Duties include teaching and patient care. Position offers excellent benefits, competitive salary, and research opportunities. Please send CV to: Neil A. Kurtzman, MD, Chairman, Department of Internal Medicine, TTUHSC, Lubbock, Texas 79430.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

OBG physician for 10 member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Expanding 21 physician multispecialty group has two openings: Pediatrician and OBG. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Board Qualified OBG Needed—Take over 31-year established OBG practice with trained, qualified office staff and low overhead. Adjacent to area's largest major hospital where founder, as former Chief of Staff, practiced. Excellent physician and community support with adequate cross-coverage available. Reasonable office practice with growth potential for additional physician. Practice profile available to qualified physicians. Send inquiries in confidence to Golden Triangle Practice Search Committee, Attn: L. Marroquin, Jr., Trustee, 4054 Nenana, Houston, Texas 77025.

Pediatrics

Expanding 21 physician multispecialty group has two openings: Pediatrician and OBG. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Board certified or eligible, immediate opening for full term or locum tenens private practice position in Dallas-Fort Worth metroplex to aggressive professional. There are in-patient and out-patient services. Must be knowledgeable in ultrasound, special procedures and CT. Please reply to Ad-637, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Acute care 166-bed hospital seeks MD board eligible/board certified invasive radiologist. Facility is equipped with modern CT, ultrasound, and nuclear medicine equipment. Located in suburb of Dallas County. Please send your confidential resume to Ad-652, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Other Opportunities

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129. Toll free in Texas 1-800-331-8472.

The Medical and Surgical Clinic of Sherman, Texas is currently expanding its multispecialty group to include specialists in pediatrics, ophthalmology and otolaryngology. Interested parties please contact Ron Marshall, Administrator, 214 893-5138 (collect).

Positions Available—Seeking BC/BE, general internist, HEM/ONC, PSY, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

Arizona based physician recruitment firm has opportunities coast to coast. "Professionals working with professionals." Over 14 years experience. Call 602 990-8080, or send CV to: Mitchell & Associates, Inc., P.O. Box 1804, Scottsdale, Arizona 85252.

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for OBC or OBE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78539; 512 383-1481.

Austin—Desire two physicians to divide 84 hour week at a primary care clinic on a permanent basis beginning June 1987. Excellent staff, providing quality, sensitive patient care. No call or inpatient responsibilities. Please contact Elizabeth Adams, 6140 West Highway 290, Austin, Texas 78735; 512 892-4820.

Texas Opportunities—$85-$150,000 guarantees. Cities, suburbs, large-small towns: neurosurgeon, neurologist, oncologist, ear-nose-throat, rheumatologist, obstetrician-gynecologist, internist, family practitioner. Call or send CV to Nancy McEntire or Ray Carter, 512 338-0041. Kemper Resources, 9442 Capital of Texas Hwy., North, Suite 350, Austin, Texas 78759.

Otorhinolaryncologist needed to join 18 physician multispecialty group. High first year guarantee in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720.

Infectious Disease Subspecialist—Must be BE/BC to join same in 100 percent consultative practice in town of 120,000 plus. Send CV to P.O. Box 2368, Beaumont, Texas 77704.

Expanding Texas Multispecialty Group—Dallas/Fort Worth area, requires BE/BC physicians: internal medicine, OBG, family practice, orthopedic surgery, anesthesiology, general surgery, pediatrics, ENT, urology, cardiology, dermatology, radiology, psychiatry. Competitive salary. Extensive benefits. Direct inquiry, CV to: Medical Director, Permanente Medical Association of Texas, 12720 Hillcrest, Suite 600, Dallas, Texas 75230.

Hall-Bennett Hospital needs a family practitioner and/or internist to fill vacancy on clinic staff. This is a splendid opportunity with excellent fringe benefits. If interested contact Administrator at P.O. Box 2071, Big Spring, Texas 79721, or call 915 267-7411 collect.

General surgeon or pediatrician to join busy internist, located along the gulf coast of Texas. Excellent opportunity. Please reply to Ad-656, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Excellent opportunity for FP, GP, GS and IM person to practice in a lake area community, in the beautiful Piney Woods area of East Texas. First year guarantee, etc. Send CV to Medical Support Services, 11509 Quarterhorse Trail, Austin, Texas 78750 or call Armando L. Frezza, 512 331-4164.

Excellent Texas opportunity for a OBG and PD person to practice in a community close-in to Houston, Texas. Enjoy country living at its best with the convenience of Houston nearby. First year guarantee, etc. Send CV to Medical Support Services, 11509 Quarterhorse Trail, Austin, Texas 78750 or call Armando L. Frezza, 512 331-4164.

Medical oncologist needed to work for another physician in Beaumont, Texas, to diagnose and treat malignant lesions of patients with emphasis on head and neck cancer. Examine internal structures and functions of organ systems, making correlation of x-ray findings with other exams and tests. Physician will establish protocol, design and diagnoses of treatment for patients. Treat malignant internal and external growths by exposure to radiation from x-rays, high energy sources, and natural and manmade radioisotopes directed at or implanted in affected areas of body. Must have Texas medical license, five years training in internal medicine and oncology and also be board certified in internal medicine. Salary $55,000 per year; 40 hours per week. Apply at the Texas Employment Commission, Beaumont, Texas or send resume to Texas Employment Commission, TEC Building, Austin, Texas 78778, JO #4640025. Ad paid for by an equal employment opportunity employer.

Excellent Physician Opportunities Nationwide—All specialties, however, FPs, IMs, OBGs, ORSs, and PDs are especially needed. Financial guarantees and benefit packages available in various practice types and community sizes. We'll help you locate the right position. For confidential interview call 713 681-7454; The Hilton Group, P.O. Box 920970-E24, Houston, Texas 77018.

Psychiatrist—Immediate opening for board eligible or board certified, licensed to practice in Texas. $68,304-$72,304, excellent fringe benefits package, including liability coverage. Position activities include some administrative functions (amount negotiable), initial assessment, ongoing treatment for clients and case consultation. Our center has several direct care programs ranging from crisis intervention to 24 hour care with a current emphasis on outpatient services and community residential options. Bilingual Spanish/English preferred, but not required. For more information, call or write W. M. Smith, Personnel Director, Life Management Center, P.O. Box 9997, El Paso, Texas 79990; 915 594-1069. EOE.

Emergency and primary care physicians needed. Full-time positions available at desirable hospitals and primary care clinics in Houston, East Texas and Golden Triangle locations. Competitive compensation and benefits package, including company paid malpractice. Call at 713 446-9696. Medical Networks, Inc., P.O. Box 4448, Houston, Texas 77210-4448.

Director of Occupational Health—City-County Health Department in South Texas coastal community is seeking a physician (MD) who is or who may become board certified in preventive medicine/occupational health. As City physician, this professional will supervise a physical fitness assessment program covering pre-employment, return-to-work screening, minor emergency treatment for job injuries, and will participate in a city-wide wellness program. Salary range is $51,000 to $72,300. Must be licensed in Texas or able to obtain Texas license. Some management and/or administrative experience required. Position open until filled, with targeted screening date of April 30, 1987. Applications subject to Open Records Act. For more information, call 512 880-3320. Resumes to: Dr. Nina Sisley, Director of Public Health, City of Corpus Christi, P.O. Box 4992, Corpus Christi, Texas 78469. Equal employment opportunity/affirmative action employer/M/F/H.

Immediate Opening—Excellent opportunity for new practitioner in fast growing North Austin area. Turnkey operation available to physician willing to share expenses and space in modern completed medical complex. Contact S. X. Rosensweig, DPM, Anderson Mill Medical Clinic, 124111 Hymeadow, Suite 3-F, Austin, Texas 78750; 512 258-5561.

Internist and pulmonologist for busy group practice. Base salary plus percentage, warm dry climate, Texas. Send resumes to Ad-657, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

OPPORTUNITIES SOUGHT

We have physicians who are looking to join solo, partnerships, or multispecialty groups in the Texas area. For more information call Medical Advisory Group, Inc., 214 758-9939.

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. 512 477-6704, ext. 263.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"
locum tenens & permanent placements

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

Family Practice Locum Tenens—Experienced, AOFP, professional liability insurance. Competitive rates. Nu Way Medical Service. 214 677-5302; #2 Crystal Drive, Athens, Texas 75751.

Experienced Houston emergency physician seeking work in a low to moderate volume ER that sees a lot of trauma. Houston or environs. US medical graduate (MD). ACLS and ATLS certified. Call 713 784-1720.

General internist-family practitioner, American graduate, seeking relocation in July 1987. Extensive experience. All situations including practice takeover considered. Urban location preferred. Please reply to Ad-655, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Doctor, you can't beat the quality or the price! Holter Monitor Scanning Service. Physician owned, trained, and supervised. Now using UP Service for faster turnaround time. No contracts to sign. We can arrange for lease/purchase of Holter equipment. Now is the time to own your own recorder for as little as $49 a month. Call DCG Interpretation 313 879-8860.

Lab Equipment—Biodynamics M430 with printer; Coulter Thrombo C with Thrombofuge; Hamilton lab chair; Planhold manual hydraulic chairs. Also, sublease Toshiba Strata VI phone system. Call Dr. Thornsvard, 512 227-6156.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than 50% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 18164, Dallas, Texas 75218; 214 369-3960; Metro 229-9253.

OBG Office Equipment—Toshiba ultrasound. Corometrics 140 monitor. IE Hydraulic exam chair. IE-104 exam furniture (tables, stools, cabinets, trash cans). MedSonics fetal dopplers with speakers. Colposcope. Cryotherapy apparatus. TIE S/16 telephone system. Wall-mounted Sphygmos and Oto-ophthalmoscopes. Autoclave. Binocular microscope. Gyn instruments. Excellent condition. J. R. Clark, MD, Waxahachie, Texas; 214 937-8880.

Office Space/Property

Austin: For lease, 1300 sq. ft. duplex near Seton. Ideal for solo. Waiting, two offices, lab, nurse's station and four exam rooms. 8en H. White, MD or Karen Haslund, MD, 512 4S4-8691.

North Dallas suburb—up to 3400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 867-6500.

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

Austin: To sublet, 2,129 sq. ft. adjacent to Seton Hospital and other primary medical facilities. Ideal for two man office. Waiting, business and reception area, two offices, three exam rooms, x-ray room/lab. Corner suite on 7th floor, with lovely view. Ten-station, 4 lines phone system available also. For more information call Debbie: 512 4S8-3257.

Denton, Texas—Brand new unique medical building offers 3,300 sq. ft. for lease or sale. Centrally located in a rapidly growing area 2S minutes away from Dallas/Fort Worth. Prefer obstetricians or ENTs. Will help with finishing out, plus three months free rent. Will share x-ray facility. Call 817 382-S466.

Austin—General internist desires to sublet half of 2,200 square foot office in Medical Arts Square. Convenient location one block from St. David's Hospital near university campus. Two exam rooms, one consultation room, chest x-ray facilities, large waiting area, free parking. Terms negotiable. 512 476-9145.

Plush Medical Office for Lease—Location: Trail Creek Medical Center, Euless, Texas. Totally furnished: exam tables, file cabinets, desks, etc. 1,000 square feet. Must see to believe! Rent: Negotiable with possibilities of buying furnishings in two years. If interested, please contact: Dr. Thomas Arnold, 214 2S2-S525.

San Antonio—2,250 square feet finished garden office space available to share. Offered by general internist. Located near 8lanco and West Avenue in rapidly growing North Central area. 512 377-3224.

Arlington—1250 sq. ft. (interior unfinished) space in new condominium complex close to Memorial Hospital for sale or lease. Drs. Gray, Watts, & Palmer, 903-D Medical Centre Drive, Arlington, Texas 76012; 817 261-85S2.

Medical Clinic—Excellent location to sublease. Northwest Austin, Steck and Shoal Creek, 8217 Shoal Creek. 1900 square feet of very attractive office space. Ideal for any general practice. For further information, details, call 512 467-1707 or 512 479-8538.

Medical Clinic North Dallas Suburb—Attractive cash flow from industrial and occupational clients, plus private patients. Desirable growth area location. In professional building with easy access and ample parking. Well established and equipped. Low down payment, excellent terms. Owner offering revenue expanding suggestions. Ray Hufford, 214 233-8200.

For Lease—Medical clinic in Farmers Branch. Can accommodate small or large offices. Up to 10,600 square feet of leasable space. Good visible location. Condominium opportunities available. Call Gail Brown, Mark R. Smith Co., 214 484-9522.

Practices

Gynecology: Houston. Extremely large, gynecology-only practice for sale in Northwest Houston. Practice enjoys an exceptional net income. Doctor retiring. Option to purchase building. 4½ days per week practice. For further details phone 713 771-5011. TMH428.

Medical practice sales and appraisals—We specialize in the valuation and selling of medical practices. If interested in buying or selling a medical practice contact our 8rokerage Division at The Health Care Group, 400 GSB Building, 8ala Cynwyd, PA 19004; 215 667-8630.

Thriving family practice for sale in South Texas. Established 10 years. Gross $250,000 plus. Excellent community opportunity and terms close to big metropolis with year around recreational facilities. Owner planning to leave for Fellowship training. Please reply to Ad-648, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Retiring family physician wishes to sell well established practice. Most suitable for Spanish-speaking doctor. Contact Reuben Mutnick, MD, 112 S. Concepcion Avenue, El Paso, Texas 79905; 915 772-5866 am, 915 S81-087S pm.

Thriving young family practice for sale. Town of 5,000 near Houston. Includes fully furnished office in leased space, lab equipment and x-ray. 25-bed hospital in town, larger facilities nearby. Great opportunity. Send CV to Ad-653, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

For Sale, OBG Practice, Austin, Texas—Well established, lucrative, O8G practice in Austin, Texas. Available in May. S12 477-110S.

Practice For Sale—Dallas, Casa Linda/White Rock East area. Doctor retiring. Well established practice, excellent for internal medicine or family practice. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice 8roker. 214 327-7765.

Thriving family practice in Amarillo available for takeover no later than July 1, 1987. Extremely low asking price. Collections May 1986-January 1987, $S76,000. Gross May 1986-January 1987, $666,000. Quick action necessary. Tremendous opportunity. Contact Ad-6S4, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

10 years, well established practice for sale, $10,000.00. Contact Dr. S. K. Ng, 301 Hillside Drive, Suite 1S, 8eeville, Texas 78102; telephone 512 3S8-8900.

BUSINESS AND FINANCIAL SERVICES

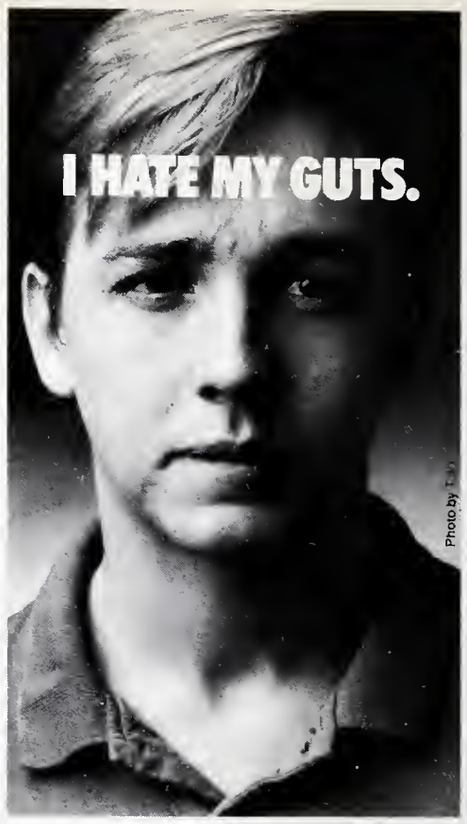
Physician's signature loans to $S0,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-690S. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 7S080. Contact Don Lewis at 214 437-1180 office, or 214 238-7129 evenings.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, S10 West 26th Street, Austin, Texas 78705; phone 512 472-92S1. (Formerly Home of the Holy Infancy)

Advertising Rates & Data: Regular classified advertising sells for $39. (US currency) per issue for 50 words or less, payable in advance. Display classified advertising sells for $70. per column inch, per month. A variety of typefaces, logos and borders may be used in display classified ads. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings cannot be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Federal laws prohibit references to race, color, religion, sex, national origin, or age unless bona fide occupational qualifications. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.



You've had painful stomach cramps before. And terrible diarrhea. Can you imagine what it would be like to live with those symptoms forever?

Well, when you have Ileitis or Ulcerative Colitis, it's like having a stomachache that never goes away.

Over 2 million men, women, and children suffer from these devastating intestinal diseases. That's more victims than Muscular Dystrophy and Cerebral Palsy combined.

For each of them, life can mean constant pain, anguish and embarrassment.

Yet as widespread as Ileitis and Ulcerative Colitis are, they're just as misunderstood.

Some people think these diseases are only in your mind.

They're not.

Some people think they come from eating the wrong kinds of foods.

They don't.

Some people even laugh at the symptoms.

They shouldn't.

Because Ileitis and Ulcerative Colitis can strike you at any age, at any time. They can put you in the hospital for weeks, even months. And there's no known cause.

Or cure.

Please help us in the fight against Ileitis and Ulcerative Colitis. We need to find a cure. And we need to put an end to harmful misconceptions.

Because when you have a disease that many people acknowledge with only snickers and whispers, it's easy to mistakenly begin hating yourself as much as you hate your disease.

The National Foundation for
Ileitis & Colitis

To send your tax-deductible contribution or for more information, please write: N.F.I.C., P.O. Box 2020, Murray Hill Station, New York, NY 10156

COURSES

MAY

TMA ANNUAL SESSION SCIENTIFIC PROGRAMMING

The following continuing medical education courses will be offered during TMA's 120th Annual Session, May 13-17, 1987, in Houston. Most courses are scheduled in the Albert Thomas Conference Center; others will be held in adjacent hotels. For further information, contact Dale Willimack, CAE, Director, Department of Annual Session and Scientific Programming, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

As an organization accredited to sponsor continuing medical education by the Accreditation Council for Continuing Medical Education, the Texas Medical Association designates these continuing medical activities as meeting the criteria for hour-for-hour credit in Category 1 of the Physician's Recognition Award (PRA) of the American Medical Association.

Adolescent Medicine

May 15, 1987
SYMPOSIUM ON ADOLESCENT SUICIDE. Room 107-A, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 6 hours

Aerospace Medicine

May 14, 1987
FLYING PHYSICIANS ASSOCIATION, SOUTHWEST REGION SCIENTIFIC PROGRAM. Room 101, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Alcoholism

May 14, 1987
SYMPOSIUM REGARDING CODEPENDENCY AND THE FAMILY. Room 102, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Allergy and Immunology

May 16, 1987
SECTION ON ALLERGY. Room 102, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Anesthesiology

May 16-17, 1987
TEXAS SOCIETY OF ANESTHESIOLOGISTS SCIENTIFIC PROGRAM. Saturday, Room 106, Albert Thomas Conference Center; Sunday, Ile de France Ballroom, Section A, Doubletree Hotel. Fee none. Category 1, AMA PRA; 10 hours

Cardiovascular Disease

May 14, 1987
SYMPOSIUM ON CARDIOVASCULAR DISEASES. Room 204, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 7 hours

Chest Disease

May 14, 1987
SECTION ON DISEASES OF THE CHEST. Room 2-D, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Colon and Rectal Surgery

May 16, 1987
SECTION ON COLON AND RECTAL SURGERY. Room 2-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 4 hours

Critical Care Medicine

May 13-14, 1987
ADVANCED TRAUMA LIFE SUPPORT COURSE. Baylor College of Medicine. Fee $400 physicians, $150 nurses. Limited enrollment, preregistration required. 16 hours ACS. Contact David V. Feliciano, MD, or Darlene Adams, RN, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 791-7170

May 14, 1987
BASIC LIFE SUPPORT FOR PHYSICIANS—COURSE. Ile de France Ballroom, Section B, Douhletree Hotel. Fee $40. Category 1, AMA PRA; 4 hours

May 14-16, 1987
ADVANCED CARDIAC LIFE SUPPORT—PROVIDER COURSE. Ile de France Ballroom, Section B, Douhletree Hotel. Fee $160. Category 1, AMA PRA; 16 hours

Dermatology

May 15-17, 1987
TEXAS DERMATOLOGICAL SOCIETY SCIENTIFIC PROGRAM. Room 2-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 11 hours

Endocrinology and Metabolism

May 15, 1987
SECTION ON ENDOCRINOLOGY. Room 2-D, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

May 16, 1987
SYMPOSIUM ON PITUITARY DISORDERS. Room 2-C, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 4 hours

Family Medicine

May 14, 1987
TEXAS ACADEMY OF FAMILY PHYSICIANS SEMINAR. Room 114, Albert Thomas Conference Center. Fee $60 members, $70 nonmembers, $20 residents of TAFP/AAFP, $30 nonmember residents, $30 RNs, PAs. Category 1, AMA PRA; 6 hours

May 15, 1987
SECTION ON FAMILY PRACTICE. Room 106, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 6 hours

Gastroenterology

May 16, 1987
SECTION ON DIGESTIVE DISEASES. Room 2-D, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 4 hours

Geratrics

May 16, 1987
SYMPOSIUM ON GERIATRICS/TEXAS MEDICAL DIRECTORS ASSOCIATION AND COMMITTEE ON AGING AND NURSING HOMES. Room 2-G, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Hematology

May 15, 1987
SYMPOSIUM ON HOSPITAL TRANSFUSION COMMITTEE. Room 105, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Internal Medicine

May 15, 1987
SECTION ON INTERNAL MEDICINE. Room 102, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Legal Medicine

May 14, 1987
SYMPOSIUM ON MEDICINE AND THE LAW. Room 110, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Medical Administration

May 15, 1987
SYMPOSIUM ON HEALTH PROBLEMS AMONG MEDICAL STUDENTS AND RESIDENT PHYSICIANS. Ile de France Ballroom, Section A, Doubletree Hotel. Fee none. Category 1, AMA PRA; 3 hours

Nephrology

May 15, 1987
RENAL PHYSICIANS OF TEXAS. Room 112, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Neurology

May 15-16, 1987
SECTION ON NEUROLOGY. Room 203, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 8 hours

Neurosurgery

May 15-16, 1987
SECTION ON NEUROLOGICAL SURGERY. Friday: Anjou Ballroom, Sections A and B, Doubletree Hotel; Saturday: Ile de France, Section A, Doubletree Hotel. Fee none. Category 1, AMA PRA; 7 hours

Nuclear Medicine

May 14, 1987
SYMPOSIUM ON MEDICAL ASPECTS OF NUCLEAR WAR. Room 109, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

May 16, 1987
SECTION ON NUCLEAR MEDICINE. Room 109, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Obstetrics and Gynecology

May 14, 1987
SECTION ON OBSTETRICS AND GYNECOLOGY. Room 106, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

May 15, 1987
SYMPOSIUM ON MATERNAL AND CHILD HEALTH. Room 202, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

Occupational Medicine

May 16-17, 1987
SECTION ON OCCUPATIONAL MEDICINE. Room 104, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Oncology

May 15-16, 1987
SECTION ON ONCOLOGY. Friday, Room 2-C and Saturday, Room 112, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Ophthalmology

May 15-16, 1987
SECTION ON OPHTHALMOLOGY. Room 204, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 10 hours

Orthopedic Surgery

May 16-17, 1987
TEXAS ORTHOPAEDIC ASSOCIATION SCIENTIFIC PROGRAM. Room 107-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 10 hours

Otolaryngology

May 15-16, 1987
SECTION ON OTOLARYNGOLOGY. Room 101, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 8 hours

Pathology

May 16, 1987
SECTION ON PATHOLOGY. Room 202, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Pediatrics

May 15, 1987
SECTION ON PEDIATRICS. Room 114, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 7 hours

Physical Medicine and Rehabilitation

May 16, 1987
SECTION ON PHYSICAL MEDICINE AND REHABILITATION. Room 111, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 7 hours

Plastic Surgery

May 15-16, 1987
SECTION ON PLASTIC, RECONSTRUCTIVE AND MAXILLOFACIAL SURGERY. Room 110, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 10 hours

Preventive Medicine and Public Health

May 15, 1987
SECTION ON PUBLIC HEALTH. Room 109, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Psychiatry

May 15, 1987
SECTION ON PSYCHIATRY. Room 107-B, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Radiology

May 15, 1987
SECTION ON RADIOLOGY. Room 108, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 5 hours

Sports Medicine

May 15, 1987
SYMPOSIUM ON SPORTS MEDICINE. Room 114, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 6 hours

Surgery

May 14, 1987
INTERNATIONAL COLLEGE OF SURGEONS, TEXAS DIVISION. Room 108, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

May 15, 1987
SECTION ON SURGERY. Room 2-C, Albert Thomas Conference Center, from 2 pm to 5 pm joint session of the Sections on Surgery and Oncology. Fee none. Category 1, AMA PRA; 4 hours

Urology

May 15, 1987
SECTION ON UROLOGY. Room 104, Albert Thomas Conference Center. Fee none. Category 1, AMA PRA; 3 hours

COURSES

MAY

Endocrinology

May 9, 1987
DIABETES SYMPOSIUM 1987. Westin Galleria Hotel, Houston. Fee $80 physicians, $40 nurses and paraprofessionals, $30 residents. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Linda Brown, Office of Continuing Education, The University of Texas Medical School, 6431 Fannin, Suite G.104, Houston, TX 77030 (713) 792-5346

Family Medicine

May 30, 1987
FAMILY PRACTICE: CLINICAL ENCOUNTERS 1987. The University of Texas Health Science Center, Room D1.600, Dallas. Fee $85. Category 1, AMA Physician's Recognition Award; 8 hours. AAFP prescribed. Contact Linda Spino, PhD, Department of Family Practice and Community Medicine, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2134

General Medicine

May 9, 1987
MANAGEMENT OF MYOCARDIAL INFARCTION IN THE COMMUNITY HOSPITAL. Registry Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

May 20, 1987
12TH ANNUAL INFECTIOUS DISEASES SEMINAR. Wyndham Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Continuing Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235

Internal Medicine

May 26-29, 1987
10TH ANNUAL INTENSIVE REVIEW OF INTERNAL MEDICINE. The University of Texas Health Science Center, Room D1.600, Dallas. Fee before May 1, $350 practicing physicians; $300 graduates of UTSWMS; $175 house staff; after May 1, $400 practicing physicians; $350 graduates of UTSWMS; $200 house staff; 29 hours. Category 1, AMA Physician's Recognition Award; 28 hours. Contact Ann Parchem, Division of Continuing Education, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Ophthalmology

May 22, 1987
YAG/ARGON WORKSHOP FOR OPHTHALMOLOGISTS. Presbyterian Hospital, Dallas. Fee $150 physicians, $75 resident fellows. Credit TBA, 7 hours. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Lane, Dallas, TX 75231 (214) 696-8458

Pathology

May 14-16, 1987
CURRENT ISSUES IN SURGICAL PATHOLOGY, VI. Room D1.600, The University of Texas Health Science Center, Room D1.600, Dallas. Fee $600 complete course with glass slides, $450 complete course without glass slides, $350 basic course, $125 per day/partial course, $125 students. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Physical Medicine and Rehabilitation

May 7-9, 1987
5TH ANNUAL CHRONIC PAIN COURSE: EVALUATION AND MANAGEMENT. Baylor College of Medicine, Houston. Fee $275 physicians, $150 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 17 hours. Contact Vicki Forgac or Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

JUNE

Aerospace Medicine

June 21-26, 1987
INTERNATIONAL SPACE LIFE SCIENCES SYMPOSIUM: THREE DECADES OF LIFE SCIENCE IN SPACE. Omni Shoreham Hotel, Washington, DC. Fee $125. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Forgac or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-4941

General Medicine

June 27, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. Houston. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP; 5 hours. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd.—223, Houston, TX 77030 (713) 792-2200

Obstetrics and Gynecology

June 17-20, 1987
MENOPAUSE: CONSEQUENCES AND TREATMENT STRATEGIES. South Padre Island Hilton Hotel, South Padre Island, Tex. Fee $150 physicians before May 2, $175 physicians after May 2, $100 residents, $75 nurses and allied health professionals; 16 hours. Contact Office of Continuing Medical Education, Scott and White Clinic, Temple, TX 76508 (817) 774-4073

Orthopedic Surgery

June 5-7, 1987
SOUTHWESTERN ORTHOPEDIC SURGERY REVIEW. Dallas. Fee $425. Category 1, AMA Physician's Recognition Award; 25 hours. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Otolaryngology

June 18-20, 1987
18TH ANNUAL OTOLARYNGOLOGY CONFERENCE/PEDIATRIC OTOLARYNGOLOGY UPDATE 1987. San Luis Hotel, Galveston, Tex. Fee $250 physicians, $125 residents. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Martha Berlin, Office of Continuing Education, 3.324 Learning Center, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Pediatrics

June 8-12, 1987
ACUTE CARE PEDIATRICS: REVIEW AND UPDATE OF THE STATE OF THE ART. Mariner's Inn, Hilton Head Island, SC. Fee $325 physicians, $225 non-Baylor residents and fellows. Category 1, AMA Physician's

Recognition Award; 25 hours. AAFP prescribed. Contact Lila Lerner or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-4941

June 11-13, 1987
1987 ANNUAL PEDIATRIC REVIEW AND UPDATE. San Luis Hotel, Galveston, Tex. Fee $275 before May 18, $315 after May 18. Category 1, AMA Physician's Recognition Award; 15 hours. Contact Gayle Norris, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Sports Medicine

June 26-27, 1987
5TH ANNUAL CONFERENCE ON INNOVATIONS IN SPORTS MEDICINE. The University of Texas Medical Branch, Learning Center, Galveston, Tex. Fee $150 physicians, $75 residents and nonphysicians. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Gayle Norris, Office of Continuing Education, 3.324 Learning Center, UTMB, Galveston, TX 77550-2782 (409) 761-2934

Surgery

June 4-7, 1987
WORKSHOPS IN GYNECOLOGICAL MICROSURGERY INCLUDING USE OF THE LASER AND OPERATIVE LAPAROSCOPY. Margo Perot Women's and Children's Hospital, Presbyterian Healthcare Center, Educational Classrooms, Dallas. Fee $825 basic workshop for practicing physicians, $725 basic workshop for residents and fellows, $900 advanced workshop for practicing physicians, $825 advanced workshop for residents and fellows. Category 1, AMA Physician's Recognition Award; 25 hours. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Lane, Dallas, TX 75231 (214) 696-8458

AUGUST

Internal Medicine

August 3-7, 1987
7TH ANNUAL INTERNAL MEDICINE REVIEW. South Padre Island, Tex. Contact Office of Continuing Medical Education, Scott and White Clinic, Temple, TX 76508 (817) 774-4073

SEPTEMBER

Endocrinology

Sept 30, 1987
CURRENT THERAPY IN DIABETES. Houston. Contact Carol Soroka or Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

OCTOBER

Radiology

Oct 30-Nov 1, 1987
DIAGNOSTIC RADIOLOGY UPDATE. Dallas. Contact Dolly Christensen, Department of Radiology, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2502 or 688-2166

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Saturdays, 9 am-12 pm (Oct 25, 1986-May 2, 1987)
FUNDAMENTALS OF PRACTICAL THERAPEUTICS. Cullen Auditorium, Baylor College of Medicine, Houston. Fee $295 physicians, $100 residents and fellows. Category 1, AMA Physician's Recognition Award; 72 hours. AAFP prescribed. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN CLINICAL NMR. Biomedical NMR Center, Baylor College of Medicine, Houston. Fee $1,000; $500 lecture series only. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Biomedical NMR Center, The Woodlands, Tex. Fee $800 physicians, $400 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4530

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

EF TELEPLAST TELECONFERENCES

April 25, 1987, Saturday, 10 am to 12 pm
OUTPATIENT CHIN ADVANCEMENT AND CRANIAL BONE GRAFT HARVESTING TECHNIQUES. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 non-members. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

CALENDAR OF MEETINGS ■Denotes Texas Meetings

APRIL

■11TH ANNUAL COOLEY RADIOLOGICAL SOCIETY MEETING, Galveston, April 24-26, 1987. Martha Berlin, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

AMERICAN BURN ASSOCIATION ANNUAL MEETING, Washington, DC, April 29-May 2, 1987. Thomas Wachtel, MD, 1130 E McDowell Rd, Suite B-2, Phoenix, AZ 85006 (602) 239-2391

AMERICAN COLLEGE OF OB/GYN ANNUAL CLINICAL MEETING, Las Vegas, April 27-30, 1987. W. H. McDannel, 600 Maryland Ave, SW, #300, Washington, DC, 20024 (207) 638-5577

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION ANNUAL MEETING, Philadelphia, April 26-May 1, 1987. Nancy Olson, 2340 S Arlington Heights Rd, #400, Arlington Heights, IL 60005 (312) 228-6850

AMERICAN PEDIATRIC SOCIETY ANNUAL MEETING, Anaheim, Calif, April 27-May 1, 1987. Audrey Brown, MD, 450 Clarkson Ave, Brooklyn, NY 11203 (718) 270-1692

AMERICAN ROENTGEN RAY SOCIETY ANNUAL MEETING, Miami, April 26-May 1, 1987. George Kling, MD, Harper-Grace Hospital, Dept of Radiology, 3990 John R, Detroit, MI 48201 (313) 494-8405

AMERICAN SOCIETY FOR HEAD AND NECK SURGERY ANNUAL MEETING, Denver, April 25-May 2, 1987. W. E. Fee, Jr, MD, ASHNS, Division of Otolaryngology, Head and Neck Surgery, Stanford University Medical Center, Stanford, CA 94305 (415) 497-5828

MANAGEMENT OF PROFESSIONALS IN ORGANIZATIONS: A TEAM APPROACH TO LEADERSHIP AND INFLUENCE, Tucson, April 13-16, 1987. Sherry Mason, American Academy of Medical Directors, 4830 W Kennedy Blvd, Suite 648, Tampa, FL 33609 (813) 873-2000

NATIONAL CONFERENCE ON HEALTH CARE LEADERSHIP AND MANAGEMENT, Toronto, April 27-29, 1987. Sherry Mason, American Academy of Medical Directors, 4830 W Kennedy Blvd, Suite 648, Tampa, FL 33609 (813) 873-2000

NATIONAL CONFERENCE ON HIGH BLOOD PRESSURE CONTROL, INC, Las Vegas, April 24-26, 1987. Yvonne Rodler, 2121 Wisconsin Ave, NW, Suite 410, Washington, DC, 20007 (202) 944-3176

SOUTHERN CALIFORNIA NEUROPSYCHIATRIC INSTITUTE 7TH INTERNATIONAL CONFERENCE/ADOLESCENTS IN CRISIS, Barbados, West Indies, April 15-20, 1987. Teresa Santana, SCNPI, 6794 La Jolla Blvd, La Jolla, CA 92037 1-800-423-9521

THE FEDERATION OF STATE MEDICAL BOARDS OF THE UNITED STATES ANNUAL MEETING. St Louis, April 23-25, 1987. The Federation of State Medical Boards of the United States, Inc, 2630 West Freeway, Suite 138, Ft Worth, TX 76102

MAY

29TH ANNUAL MEETING FOR BIOCOMMUNICATORS, Norfolk, Va, May 22-27, 1987. L. Elsesser, Executive Director, Health Sciences Communications Association, 6105 Lindell Blvd, St Louis, MO 63112 (314) 725-4722

AEROSPACE MEDICAL ASSOCIATION 58TH ANNUAL SCIENTIFIC MEETING, Las Vegas, May 10-14, 1987. R. R. Hessberg, MD, Executive Vice President, Washington National Airport, Washington, DC, 20001-4977 (703) 892-2240

AMERICAN ACADEMY OF PSYCHOANALYSIS 31ST ANNUAL MEETING, Chicago, May 7-10, 1987. AAP, 30 East 40th St, Suite 608, New York, NY 10016 (212)679-4105

AMERICAN ASSOCIATION OF PLASTIC SURGEONS ANNUAL MEETING, Nashville, Tenn, May 3-6, 1987. John Hoopes, MD, The Johns Hopkins Hospital, 600 North Wolfe St, Baltimore, MD 21205 (301) 955-6897

AMERICAN GASTROENTEROLOGICAL ASSOCIATION ANNUAL MEETING, Chicago, May 9-13, 1987. Sharon Szmaciasz, 6900 Grove Rd, Thorofare, NJ 08086 (609) 848-1000

AMERICAN PSYCHIATRIC ASSOCIATION ANNUAL MEETING, Chicago, May 9-15, 1987. Kathleen Bryan, Director, Meetings Management, 1400 K St, NW, Suite 503, Washington, DC 20005 (202) 682-6100

AMERICAN THORACIC SOCIETY ANNUAL MEETING, New Orleans, May 10-13, 1987. S.R. Iannotta, 1740 Broadway, New York, NY 10019 (212) 315-8778

■FLYING PHYSICIANS ASSOCIATION MEETING, Houston, May 14, 1987. Anthony Ziegler, Jr, MD, PO Box 60308, Houston 77205

■G.W.N. EGGERS SOCIETY/UTMB ORTHOPAEDIC ALUMNI 4TH ANNUAL MEETING, Galveston, May 19-21, 1987. Susan Royal, UTMB, Office of Continuing Education, Learning Center, J-34, Galveston, TX 77550-2782 (409) 761-2934

■INTERNATIONAL COLLEGE OF SURGEONS, TEXAS DIVISION MEETING, Houston, May 14, 1987. Leo Cuello, MD, 8038 Wurzbach Rd, San Antonio, TX 78229

LOUISIANA-MISSISSIPPI OPHTHALMOLOGICAL AND OTOLARYNGOLOGICAL SOCIETY 49TH ANNUAL MEETING, Biloxi, MS, May 28-30, 1987. Ben Davis, Jr, CAE, Executive Secretary, Louisiana-Mississippi O&O Society, PO Box 12314, Jackson, MS 39211 (601) 956-7787

MASTER APPPROACH TO CARDIOVASCULAR PROBLEMS 15TH ANNUAL CONFERENCE, Lake Buena Vista, Fla, May 30-June 1, 1987. Mrs Y. Barcena, Division of Cardiology, D-39, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 549-7124

NATIONAL RURAL HEALTH CARE ASSOCIATION NATIONAL CONFERENCE, Nashville, Tenn, May 6-9, 1987. NRHCA, 301 E Armour Blvd, Suite 420, Kansas City, MO 64111

■PHYSICIANS FOR SOCIAL RESPONSIBILITIES MEETING, Houston, May 14, 1987. Otto Lippmann, MD, 3104 Perry Lane, Austin, TX 78731

■PITUITARY SOCIETY OF HOUSTON MEETING, Houston, May 16, 1987. Floyd Haar, MD, 1213 Hermann Dr, #645, Houston, TX 77004

■RENAL PHYSICIANS OF TEXAS MEETING, Houston, May 15, 1987. Alan Hull, MD, 6010 Forest Park Rd, Dallas, TX 75235

■TEXAS ALLERGY SOCIETY MEETING, Houston, May 16, 1987. A. H. Redman, Jr, MD; 7505 Fannin, Houston, TX 77054

■TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS MEETING, Houston, May 16, 1987. T. Guy Bragg, III, MD, 1725 Ed Carey Dr, Harlingen, TX 78550

■TEXAS ASSOCIATION OF OTOLARYNGOLOGY, HEAD AND NECK SURGERY MEETING, Houston, May 15, 1987. Lewis Raney, MD, 6111 Harry Hines Blvd, Dallas, TX 75235

■TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE MEETING, Houston, May 16, 1987. Elizabeth Barber, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS DERMATOLOGICAL SOCIETY MEETING, Houston, May 16, 1987. Edward Spencer, MD, 3403 Loy Lake Rd, Sherman, TX 75090 (214) 892-2126

■TEXAS DIABETES AND ENDOCRINE ASSOCIATION MEETING, Houston, May 15, 1987. John Comstock, MD, 807 Rice, Houston, TX 77096

■**TEXAS MEDICAL ASSOCIATION**, Houston, May 13-17. Dale Willimack, CAE, 1801 N Lamar Blvd, Austin, TX 78701

■TEXAS NEUROLOGICAL SOCIETY MEETING, Houston, May 15, 1987. Leonard Hershkowitz, MD, 6565 DeMoss, #203, Houston 77074

■TEXAS OCCUPATIONAL MEDICAL ASSOCIATION MEETING, Houston, May 15, 1987. Glen Douglas, MD, PO Box 2451, Houston, TX 77001

■TEXAS OPHTHALMOLOGICAL ASSOCIATION MEETING, Houston, May 15, 1987. Iris Wenzel, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS ORTHOPAEDIC ASSOCIATION MEETING, Houston, May 16, 1987. Elizabeth Barber, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS PEDIATRIC SOCIETY MEETING, Houston, May 16, 1987. Mary Greene, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY MEETING, Houston, May 16, 1987. Salvador Baylan, MD, 12803 Park Forest, San Antonio 78230

■TEXAS SOCIETY OF ANESTHESIOLOGISTS MEETING, Houston, May 16-17, 1987. Joseph Gabel, MD, Dept of Anesthesiology, The University of Texas Medical School, 6431 Fannin, Room 5020, Houston, TX 77030

■TEXAS SOCIETY OF COLON AND RECTAL SURGEONS MEETING, Houston, May 16, 1987. William Barnett, MD, 1003 N Washington, Dallas, TX 75204

■TEXAS SOCIETY OF PATHOLOGISTS MEETING, Houston, May 16, 1987. Iris Wenzel, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS SOCIETY OF PLASTIC SURGEONS MEETING, Houston, May 15, 1987. Dennis Lynch, MD, 2401 S 31st St, Temple, TX 76508 (817) 774-2321

■TEXAS SOCIETY OF SPORTS MEDICINE, Houston, May 16, 1987. Thomas Clanton, MD, 6410 Fannin, Suite 310, Houston, TX 77030

JUNE

AMERICAN CANCER SOCIETY 2ND NATIONAL CONFERENCE ON CANCER PREVENTION AND DETECTION, Seattle, June 25-27, 1987. American Cancer Society, 90 Park Avenue, New York, NY 10016

AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING, Chicago, June 21-25, 1987. Felix Niespodziewanski, 535 N Dearborn St, Chicago, IL 60610 (312) 645-4597

Advertising Directory

Air Force	**24**
Air Force Reserve	**85**
American Physicians Insurance Exchange	**40**
American Physicians Life Insurance	**35**
American Society of Lipo-Suction Surgery, Inc.	**28**
Ayerst Laboratories	**53–56, 96–98**
BMW Center	**3rd Cover**
Burroughs Wellcome	**19–21**
Campbell Laboratories, Inc.	**52**
Choice Investment Products	**35**
Ciba-Geigy Corporation	**11, 12**
Dallas Rehabilitation Institute	**2nd Cover**
Diagnostic Clinic of Houston	**93**
I. C. System, Inc.	**48**
Kanaly Trust Company	**72**
Knoll Pharmaceutical	**17, 18**
Eli Lilly & Company	**4**
Marion Laboratories, Inc.	**73, 74**
MedExchange	**72**
The Medical Protective Company	**8**
Norwich Eaton Pharmaceuticals	**71, 72**
Roche Laboratories	**1, 2, 16, 81, 82**
Roerig	**76–78**
Scott and White Clinic	**Back Cover**
Smith Kline & French Laboratories	**75**
Spring Shadows Glen	**2nd Cover**
Starlite Village Hospital	**52**
Texas Department of Mental Health and Mental Retardation	**35**
Texas Medical Association	
120th Annual Session	**65–70**
HealthWise Series	**10**
Medical Liability Crisis Brochure	**12**
Memorial Library	**92**
Texas Medical Association Insurance Program	**13**
Texas Medical Liability Trust	**89**
Timberlawn Psychiatric Hospital	**Back Cover**
The University of Texas Health Center at Tyler	**88**
The Upjohn Company	**95**
Vestra-Subco, Inc.	**85**
Western Medical Corp.	**34**
Texas Physician's Directory	**99–105**
Classified Advertising	**106–108**

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

TAKE ADVANTAGE OF OUR SPECIAL MEDICAL LEASE RATES.

1987 325 **$290.73** per mo.	1987 528ea **$328.11** per mo.	1987 535is **$484.91** per mo.
1987 635csi **$660.78** per mo.	1987 735i **$577.37** per mo.	

Over 150 new BMW's to choose from. All with A.B.S. brakes, 3 year/36,000 mile warranty and 24 hour emergency roadside service.

Prices based on a 60 month closed end lease. Customer to pay first month's payment, security deposit, tax, title and license fees at inception of contract

The New BMW

BMW CENTER

FACTORY AUTHORIZED.

4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

S&W SCOTT&WHITE

Texas A&M University
College of Medicine

Third Annual
FAMILY MEDICINE REVIEW

Selected Topics
With Testing Techniques
for Board Exams

Four Seasons Hotel
AUSTIN, TEXAS

April 22-26, 1987

A National Symposium

MENOPAUSE: CONSEQUENCES AND TREATMENT STRATEGIES

South Padre Island, Hilton Resort
South Padre Island, Texas

June 17-20, 1987

For more information or to register contact: Office of Continuing Medical Education, Scott and White, Temple, Texas 76508, (817) 774-4073.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223 214/381-7181

TexasMedicine

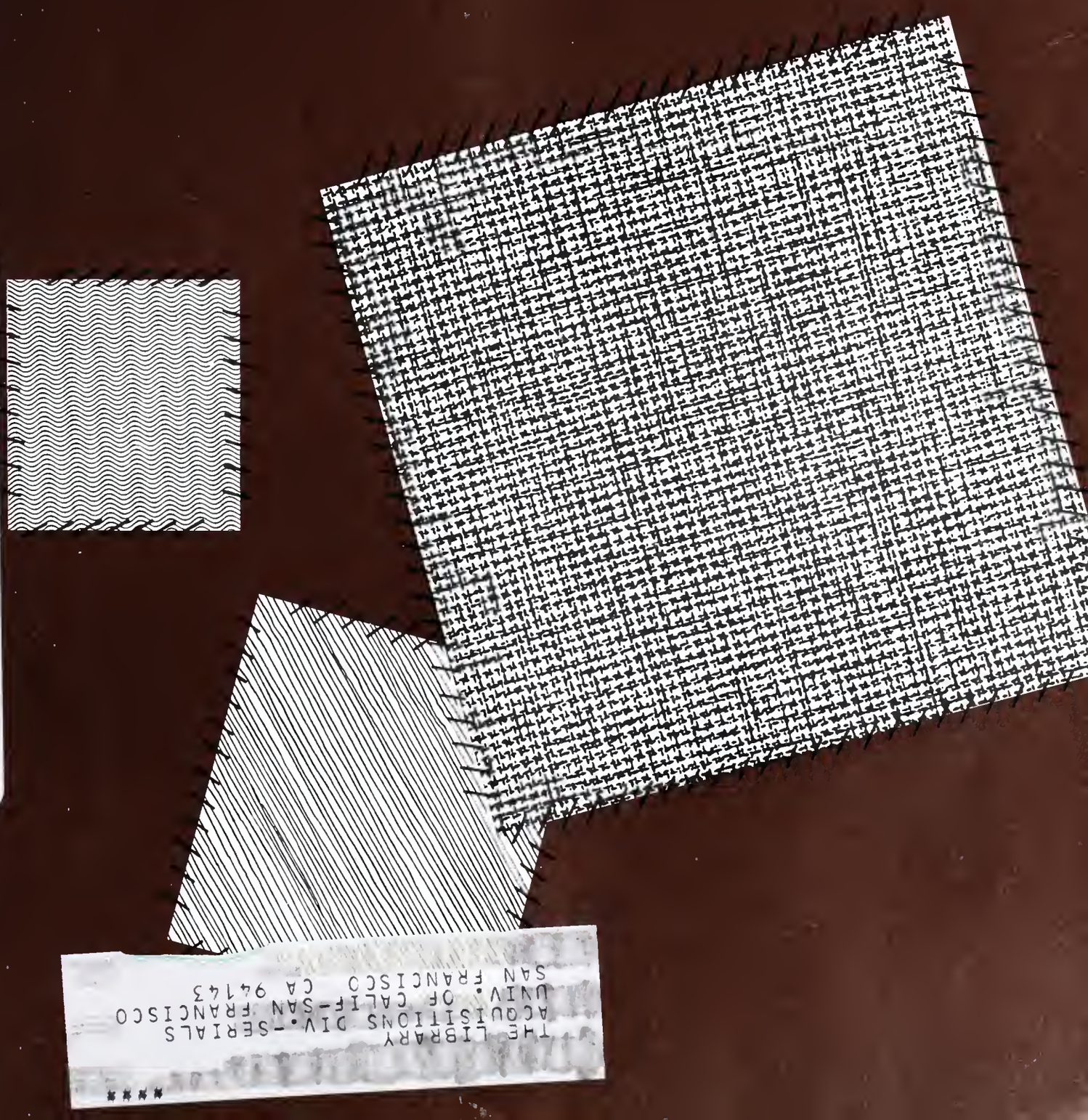
52 Cosmetologists to cancer

55 Update of trauma rules

60 Practice Management: Take two, and take charge

61 President Ron Bell Evans, MD: Barnstorming diplomat

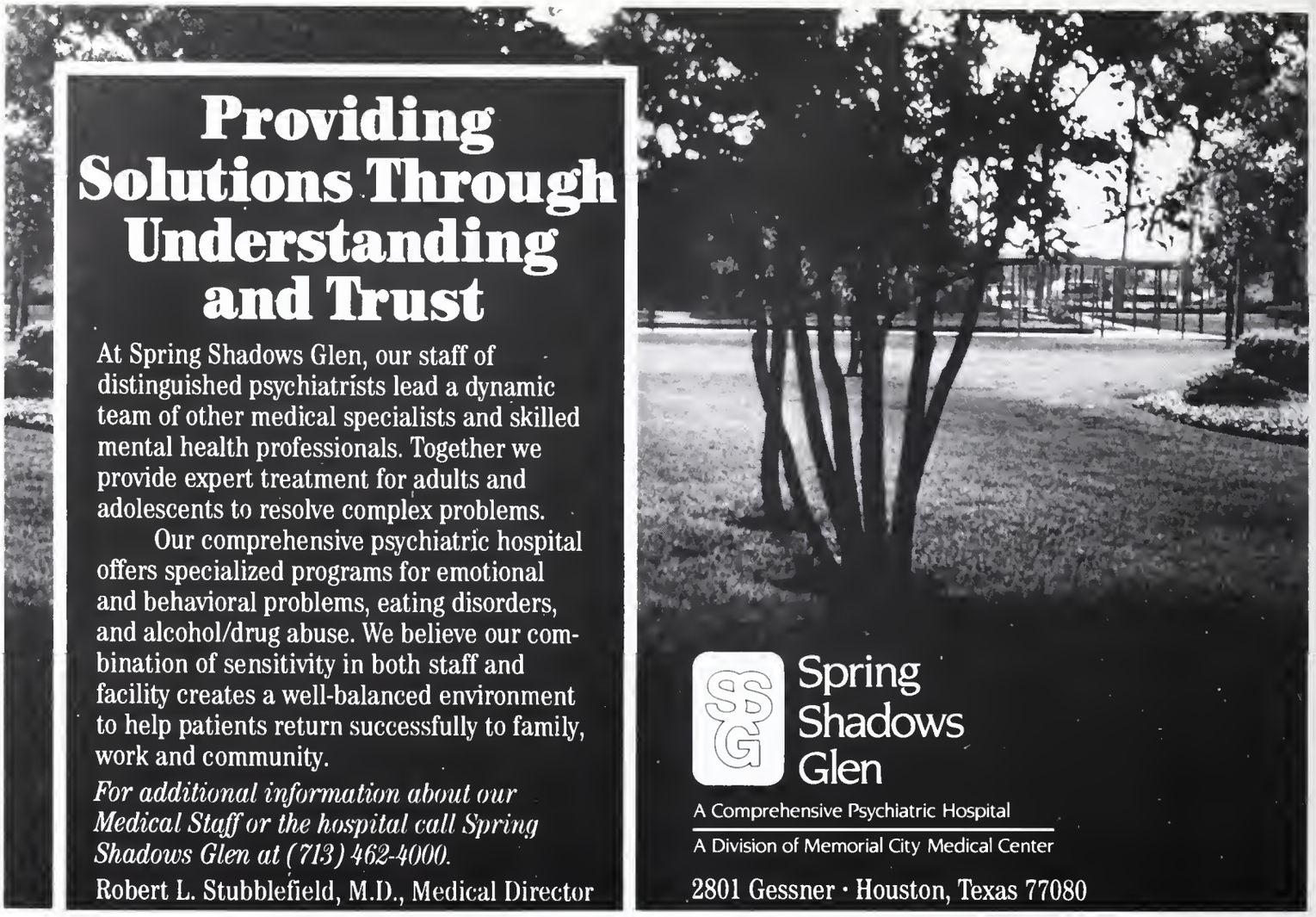
5, 6, 27 **Health care for indigents**



U.C. SAN FRANCISCO
MAY 21 1987

THE LIBRARY
ACQUISITIONS DIV.-SERIALS
UNIV. OF CALIF-SAN FRANCISCO
SAN FRANCISCO CA 94143

****



Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080

MICHAEL R. SHARP
ATTORNEY

REPRESENTATION IN MATTERS OF PROFESSIONAL LICENSURE BEFORE THE TEXAS STATE BOARD OF MEDICAL EXAMINERS

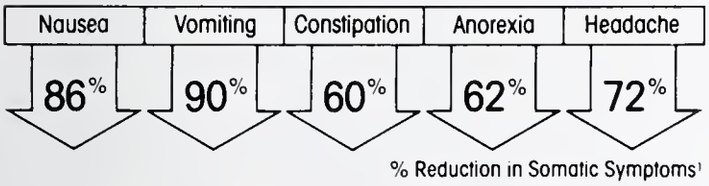
SHARP, TACKETT & DAVIDSON,
A PROFESSIONAL CORPORATION
1680 One American Center • Austin, Texas 78701 • (512) 473-2265

Not certified by the Texas Board of Legal Specialization.
Certification is not currently available to anyone in this legal area.

See the difference in the first week[1]

Significantly faster relief—62% of total four-week improvement evident in first week versus 44% with amitriptyline alone[1]

Dramatic first-week reduction in somatic complaints[2]



% Reduction in Somatic Symptoms[1]

Only ⅓ the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Copyright © 1987 by Roche Products Inc. All rights reserved.

Protect your decision. Write "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

References: **1.** Feighner JP, *et al: Psychopharmacology 61* 217-225, Mar 22, 1979. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ

Limbitrol® Ⓒ IV
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500, Tel-E-Dose® packages of 100, Prescription Paks of 50.

ROCHE®
ROCHE PRODUCTS INC
Manati, Puerto Rico 00701

P.I. 0585

THE REWARDS OF LIMBITROL
You're both smiling again!
In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.[1]
IN MODERATE DEPRESSION AND ANXIETY
Limbitrol®
Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Limbitrol® DS
Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)
SEE THE DIFFERENCE IN THE FIRST WEEK[1]
ROCHE
Please see references and summary of product information on adjacent page.

TexasMedicine

VOLUME 83 MAY 1987

Contents

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

Harold R. High, MD, Cuero
Secretary

Merle W. Delmer, MD, San Antonio
James M. Graham, MD, Austin
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

Jim Bob Brame, MD, Eldorado
President

Nancy W. Dickey, MD, Richmond
Vice President

David Vanderpool, MD, Dallas
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Margie B. Peschel, MD, Fort Worth
Secretary

Robert G. Mickey, Austin
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd. Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B Jones, News Editor
Shari Henson, Production Manager/
Editorial Assistant
Patty Illich, Administrative Secretary/
Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
L. Maximilian Buja, MD, Dallas
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates, plus 7.25% state sales tax for Texas subscribers only, are: Members, $16 per year plus $1 16 sales tax; nonmembers and institutions, $20 per year plus $1.45 sales tax; foreign, $24 US currency; single copy, $2 plus $ 15 sales tax.

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701.

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701.

ARTICLES

27 Indigent health care: a continuing dilemma
Edward N. Brandt, Jr, MD, PhD

32 Private physicians as medical educators
John C. Meadows, Jr, MD; Richard L. Bauer, MD, MSc; Andrew K. Diehl, MD, MSc

39 Pregnancy and brucellosis
Randall T. Kelly, MD; Betty Bibbins, MD

43 Rubella susceptibility in young women of rural East Texas: 1980 and 1985
Marietta Crowder, MD; Harold L. Higgins, Jr, MS; J. Jack Frost

50 Access to emergency care—a Texas right
Eugene M. Hoyt, JD, MD

58 Cancer update: Coagulopathies in cancer
James Gould, MD; Kenneth Wu, MD

EDITORIALS

5 There will always be poor people!
Fernando A. Guerra, MD

6 Appeal: Save preventive health programs
Clift Price, MD

7 The Texas Medical Foundation and compassion
John H. Selby, MD

8 The shopping center model of hospital care
Myron F. Weiner, MD

FEATURE

63 President's job takes Dr Brame across Texas and back

NEWS

TMA in action

15 Advocacy committee supports amendments to peer review law
15 Physicians spending more time pursuing continuing education
15 New service helps physicians establish and develop practice
15 Handbook offers guidelines for physician intervenors
16 Council announces winners of 1987 Anson Jones Awards

Health line

16 FDA asks customs officials to block Redotex supplies
16 TDH publishes directories of AIDS information
20 Immunization schedule for children revised

Socioeconomics

20 AMA members get discount on insurance claim forms
20 CHAMPUS alerts providers on participation directories

Capital comments

22 Texas reps join cosponsors of concurrent resolution
23 Peer review activities safe from antitrust action
23 AMA identifies priorities in legislative arena
23 Newsmakers

DEPARTMENTS

12 Letters
62 Clinical abstracts
65 Medicine and the law: Changing times—an update of TSBME rules
68 Practice Management: Daily two-minute meeting keeps doctor in charge
70 Deaths
77 Medicine in literature
90 Continuing education directory

ON THE COVER

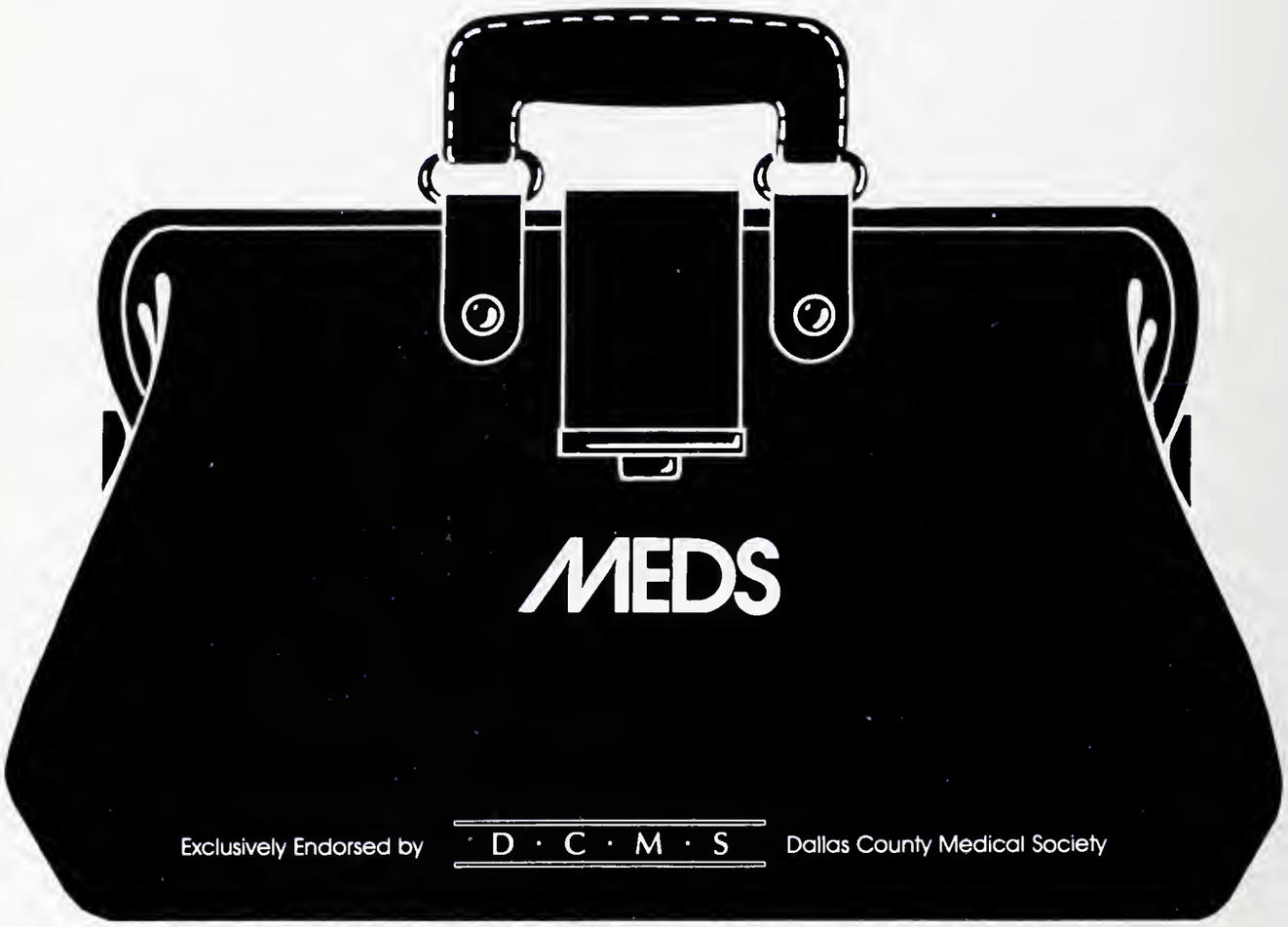
"Indigent health care: a continuing dilemma" is the subject of this month's cover. Written by Edward N. Brandt, Jr, MD, PhD, the article (page 27) examines factors influencing the health care system, available options in dealing with indigent health care, and ways to pay for indigent care. An accompanying editorial, "There will always be poor people!" written by Fernando A. Guerra, MD, begins on page 5.

COMING NEXT MONTH

Scheduled for the June issue of *Texas Medicine* are articles on reoperation for failed myocardial revascularization procedures, elevated blood lead levels in adults, an evaluation program in a nonpublic not-for-profit hospital, and adjuvant pain treatment in cancer.

Physicians Computerized Office Management System

WE MAKE HOUSE CALLS



Exclusively Endorsed by D · C · M · S Dallas County Medical Society

MEDS will individuolly tailor an Office Monagement system to fit your practice needs. Texas bosed, MEDS has been satisfying the data processing needs of physicians across the Southwest for over eight years. MEDS systems help simplify and streamline the increosingly complex problem of managing your practice. Contact us so that we can show you all the ways your proctice can benefit from a system of your own.

MEDS PROVIDES

- Electronic cloims submissions
- Stote of the ort hordware
- Ongoing on site training
- Patient scheduling and recoll
- Insuronce filing ond tracking

MEDS

Corporote Office Dollos
Ten Thousond Central Suite 1000
10000 North Centrol Expy Dollos, Texas 75231
(214) 739-3737

Medical Data Systems, Inc.
CALL TOLL FREE
1 (800) 272-MEDS

Austin Office
H & K Executive Suites
1104 S. Moys Round Rock, Texos 78664
(512) 388-4642

There will always be poor people!

Dr Edward Brandt's timely paper, "Indigent Health Care: A Continuing Dilemma," (p 27) allows a serious and in-depth look at a major societal problem that is becoming increasingly complex, and for which there are no easy solutions. It is a credit to the Texas Medical Association to have allocated space in its journal to this important topic, and also to have recently had a special session for its Medical Student Section on "Health Care for the Indigent." I recall other efforts by the TMA, again an expression of concern through its Committee on Health Care for the Poor in the early 1970s, and occasional conferences and seminars at annual meetings. Similar efforts have gone on in the AMA and other professional societies. The passage of the indigent health care package by the 69th Texas Legislature certainly stands as a tribute to many of these earlier efforts. Yet, there have been no long-term solutions, and as Dr Brandt suggests, it is a continuing dilemma and one for which there are a number of possible options.

In an indulgent sort of way, I would like to further emphasize the dimensions of indigency which Dr Brandt writes about in general terms and look at it from the standpoint of demographic, human ecologic, and economic trends, which perhaps are as relevant to a discussion of indigent health care as the triad of access, quality, and cost. Looking at such trends may also help to better understand the clinical implications and the potential extent of societal responsibility.

Initially, I am convinced that the numbers of poor people are enormous. The census data indentified 14% of the population in the US in 1985 (or 33.1 million people), who were poor and had a family income of less than the federal poverty income level of $10,989 for a family of four. Also my regular observations confirm the extent of poverty in my practice, in our Children's Hospital, in our community, and in different regions of the country that I have visited with the Physician's Task Force on Hunger in America. I am sure that similar observations are made often by our colleagues across the state, especially those in areas that are economically deprived or are most affected by the recent economic recession. I have found, also, that when one is caring for a medically indigent patient, one cannot be so categorical in one's thinking. Rather, it must be kept in mind that there quite often are several other needs such as housing, food, transportation, and clothing. Although we might resolve the medical problem, it may be short-lived if we have done nothing to improve socioeconomic and living conditions that predispose to illness or poor health.

As I look at my 12 years of practice in the central part of a large, rapidly growing metropolitan area, and compare by observations with those of my colleagues in a similar setting, I find that approximately 35% of our patient population now receive food stamps, help from WIC, rent subsidies, AFDC, and Medicaid, as compared to no more than 10% when I first opened my office. At the same time, around the country, the poverty rate for children in 1985 was 20.5%. One out of every five children is known to be poor. Of importance in our state and region is the fact that one half of the poorest 40% of families are headed by a woman who is a single parent. Another important demographic trend relates to the Hispanic community, and its overall poverty rate in 1985 of 29%, or twice the national rate. This represents about 5.2 million individuals, most of whom reside in Texas, California, and the other border states.

It is now also recognized that the poverty rate has generally stayed much higher than the unemployment rate, and seems to reflect a growing inequality of income between rich and poor. In this regard, from 1980 to 1985 the typical family in the poorest 40% of the population saw its income decline by $236 after adjusting for inflation, while the typical family in the top 40% saw its income rise by almost $3,000. From an economic standpoint, the modest changes in the distribution of income have resulted in large increases in poverty.

We as physicians must understand the dimensions of poverty and know that there are many families and individuals whom we see in our offices, clinics, and hospital emergency rooms who are poor or "near poor." At the same time, there are those who perhaps are spared the burden of medical indigency by being employed, and are eligible for health insurance benefits; AFDC recipients are eligible for Medicaid, and the elderly have Medicare. Unfortunately, in today's economic hard times there are many people without work or with only marginal employment, and without health insurance for themselves and their families. Because of eligibility requirements, they are not covered by Medicaid. These are the truly indigent, and in particular, medically indigent under certain circumstances.

From the standpoint of allocations of resources, it is important to include, among the indigent, the elderly and disabled. They require long-term care, and are increasing both in numbers and need for more resources and services. There is also the growing middle class, which expects to benefit from the progress in science and biotechnology, especially as it can be applied to catastrophic medical problems. As these forces gather momentum and come into direct conflict, it will no longer be possible to cross-subsidize, or shift costs, and in the future we may be dealing not so much with indigents as a separate group, but rather with a new group, called the "medically homeless." As has been suggested by a group of health economists, if such trends continue as they are at present, this group may be somewhere in the range of 35 to 40 million people by the mid 1990s.

Like Dr Brandt, I have no clear or real solutions. I agree that there must be shared responsibility between the states and the individual. I would expand that to include society in general. In this regard, I am reminded of a series of conversations that took place over many months with a dear friend and mentor, the late Jim Sweeney, MD, San Antonio, professor of pediatrics, nephrologist, researcher, outstanding clinician, and most importantly, a caring human being, who said to me as I struggled with career choices, "There will always be poor people; somehow we must take care of them."

FERNANDO A. GUERRA, MD
401 W Commerce, Suite 205, San Antonio, TX 78207.

Appeal: Save preventive health programs

When the oil boom days in Texas began to wane earlier in this decade, medical care became a luxury that many Texans could no longer afford. Some Texans who had been self-sufficient suddenly found themselves classified as indigent. Those who were able to remain financially self-reliant could no longer afford health insurance. These two groups—the indigent and the "medically indigent"—represented almost *1½ million* Texans. Nobody knew what to do about this sudden result of the economy. Some people, of course, simply went without the medical care they needed. Others arrived at emergency rooms where, in some instances, they were "referred" to hospitals that would pick up the tab. Some physicians charged nothing or reduced their fees. Tragically, the sudden economic decline threatened the health of the next generation of Texans: The state estimated that almost one fourth of all infants born in 1987 would be born to indigent parents.

Faced with these problems, the 69th Texas Legislature passed major reforms and programs to improve health care for indigent Texans. The "county responsibility" bill, for example, required each county to match or exceed health services provided to the poor by Medicaid. Hospital transfer requirements were tightened to discourage "dumping" of poor patients onto public hospitals, Medicaid was increased for first-time pregnant women, and hospitals were made responsible for consistent reporting of their services provided at no charge to the poor.

These are a few of the measures enacted by the 69th Texas Legislature. They are admirable and necessary—but not complete. One could argue that a $63 million package passed in the face of economic disaster is heroic, not merely admirable. But this fiscal argument does not take into account two factors: continuing human need *and* the fact that problems neglected will become more costly later.

Two programs passed by the 69th Texas Legislature already illustrate this clearly. Of the $63 million appropriated by the legislature for the entire package of bills to help the poor, $30.2 million funded two programs: the Maternal and Infant Health Improvement Act (MIHIA) ($22.2 million) and the Primary Care Services Act ($8 million). Even though these programs only began to offer services midway through 1986, they apparently are reaching the goals intended by the legislature.

The Maternal and Infant Health Improvement Act (MIHIA) was enacted to provide comprehensive maternal services for indigent women. These services also included intrapartum care and neonatal services for the newborn. Funding was sufficient to secure optimal prenatal and consultative services throughout Texas. Systems of care are being developed to assure prenatal care in the 55 counties that were designated in need of this service for indigent pregnant women. Public health clinics, community health centers, and the private medical sector are the groups working to provide this service. The bulk of the money will be used to pay hospitals and physicians for intrapartum and neonatal services. Currently MIHIA pays only for the high-risk services that are provided through 34 contractors (ie, medical schools, community health centers, a local hospital, a hospital district, a community action agency, council of governments, and health departments). Most of the estimated 10,000 high-risk women not insured and not Medicaid eligible should be receiving MIHIA services in 1987.

A typical MIHIA patient who represents good primary prevention is a 21-year-old woman (gravida III, para II) whose two previous pregnancies ended at 28 and 26 weeks of gestation. She had received late prenatal care in the second and third trimesters of her previous pregnancies because she had no money for medical care and was not eligible for Medicaid or a health district program. Through outreach she was brought into the MIHIA program as an obvious high-risk mother. With services, such as the March of Dimes childbirth class and telephone contact with clinic personnel, she obtained medical care, learned good health practices, and delivered a healthy full-term infant. Her case represents the cost-effectiveness of optimal perinatal care, and she will be referred for family planning.

The Primary Health Care Services Program represents another major effort to provide early primary care, teaching patients how to help maintain their own health and avoid inappropriate use of the emergency room and hospitalization due to "waiting too late" for services.

Primary care services are currently being provided in 26 demonstration projects scattered about Texas. Contractors—including HMOs and agencies similar to those for the MIHIA program—have recruited primary care physicians to provide direct services. Clients are indigent patients who are not Medicaid eligible or are not under responsibility of the counties' indigent care programs.

A typical patient enrolled in primary care services in a rural area is a 45-year-old Hispanic woman who is insulin dependent and has had several previous episodes of ketoacidosis requiring hospitalization. She presented herself to the program, seeking financial aid in obtaining insulin. She was seen by a primary care physician who discovered that her fasting blood sugar level was elevated (400 mg/dL) (22.204 mmol/L) and referred her to an internist. The total initial cost for physician visits was less than $100. If she had been hospitalized as she had been before in her hometown, the cost (based upon DRG reimbursement rates) would have been approximately $2,300. By receiving these primary care services, she was introduced into a program that provides both continuity of care and health education for better self-responsibility. Such cases show that a dollar invested in early care is reflected in a better medical outcome and savings of many dollars. It will be several years before the usual measurements of health, such as perinatal and infant mortality results, will be available for the MIHIA program and before health costs and morbidity and mortality results can be measured in the primary care projects.

The Crippled Children's Services Program delivers through 5,000 private sector doctors, hospitals, therapists, pharmacies, and other health care providers needed medical care, equipment, and rehabilitation to children with muscle, bone, and joint deformities; cancer; cystic fibrosis; spina bifida; and other selected chronic illnesses and handicapping conditions. The need for this program is obvious.

While the legislature's health care record was exeellent, its solution to needs of handieapped ehildren was not so eommendable. Crippled Children's Scrvices Program funds were cut 16%, from about $81 million to about $68 million, for thc 1986–1987 biennium. Approximately 5,600 children have been removed from program eligibility beeausc of this reduced funding. In the past year, the number of families applying for program coverage has inereased by 310%. Newly unemployed parents previously able to provide for their ehildren's special health needs through privatc insurance and private health providers are for the first time turning to the state for assistance. Group health insurance coverage for handicapped ehildren often is lost when the parent loses his or her job, and most new health insurance has a one-year waiting period for preexisting eonditions.

The Texas Department of Health has asked the 70th Legislature to authorize funds to sustain the current case load growth with more comprehensive services to absorb antieipated medical cost increases. By requesting the sustaining level, the TDH hopes to remedy the past 16 months of denying needy families services for their crippled child. This sad story contrasts markedly with the happy pictures sent to thc TDH by appreciative mothers of children whose eleft lip has been repaired, or whose new wheelchair gives an older child newfound mobility and independence, or whose heart surgeries have turned a cyanotic baby into a nearly normal active child.

Medically needy ehildren and adults have traditionally been cared for by Texas physicians. Howcver, the economy and the state funding crisis require that physicians broaden their role and work for adequate funding of these vital programs. We must tell our legislators that medically indigent children and adults have been helped by the work of the 69th legislative session and that these better medical results cost less than the alternative.

Meet briefly with your legislator to make these points and to explain *your* concerns about the need for inereased funding of the Crippled Children's Services Program and continued support at least at the current level for MIHIA and the Primary Care Services Program. Tell him or her how the funding will affeet your district and the state. After your meeting, write a letter of appreeiation that includes a summary of your key points. If you are unable to meet with your representative, write a one-page letter expressing your beliefs about the program's needs. Make your appeal soon.

Primary prevention programs improve and save lives as well as dollars. Our state can pay now to help its eitizens—or it can pay more dearly later. Your direct contact with your representative may make a signifieant difference to many Texans in need.

CLIFT PRICE, MD
Associate Commissioner for Personal Health Services, Texas Department of Health, 1100 49th St, Austin, TX 78756.

The Texas Medical Foundation and compassion

Several months ago, representatives to thc TMA House of Delegates presented a resolution that the Texas Medical Foundation show more compassion. Dietionaries dcfine compassion as a "deep feeling for, and understanding of, misery or suffering and the coneomitant desire to promote its alleviation; spiritual consciousness of the personal tragedy of another or others and selfless tenderness directed toward it; sympathy."

As physieians we are endowed with a high degree of compassion, or we probably would not have selected this particular profession. Compassion toward our patients is a basie part of our makeup. The samc is truc of physicians who are doing the evaluations for peer review for the Texas Medieal Foundation; however, we need to define compassion and welfare. We also need to look at the law that governs the Health Care Financing Administration (HCFA) and the Medicare program.

The law is outlined in section 1862(a)(1) of thc Social Security Act, whieh statcs that "no payment may be made under Part A or Part B for any expense incurred for items or services which are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the funetioning of a malformed body member."

In this regard, compassion is probably demonstrated best by maintaining sufficient funds in the Mcdicare program to allow eare for seriously ill paticnts who cannot be handled in any way other than hospitalization. In order to have these funds, we have to very carefully differentiate between medical indications and soeial indications.

Therc are many times when we as physicians certainly would like to approve the hospitalization of patients for their convcnience or thcir comfort, but wc have an obligation to thc taxpayers and to other Medicare reeipients to see that Medicare patients are taken care of in the least expensive facility possible. If the skilled eare of a hospital is not required, then a skilled nursing home or home eare program must be utilized. It is part of the responsibility not only of the Tcxas Medieal Foundation but of the Texas Medical Assoeiation to influence and educate our physieians to use the least expensive program possible for the mcdical care of thcir patients.

Welfare is not the primary purpose of thc law as stated. Though our sympathy and compassion may extend to thesc people in the desire to make diagnostic studies convenient and comfortablc, we must remember that funds must bc availablc for people who can survive only if they have the more expensive eare of the hospital environment.

JOHN H. SELBY, MD
4809 University, Suite 201, Lubbock, TX 79413.

The shopping center model of hospital care

Hospitals and shopping centers. Are they really different? Each is a collection of entrepreneurs gathered together for their mutual benefit and the convenience of their customers. Each has concern with the quality of its occupants' wares as it relates to the customers' satisfaction and their potential return for more merchandise or services.

Using this analogy and following the respected tradition of a free marketplace, it would seem that hospitals and shopping centers ought to be operated in the same way. Everyone who sells a health-related service could be allowed to compete for a place in the hospital to purvey those services. Pricing would then become competitive, and the most business would go to the lowest bidder. Thus, the cost of health care would be reduced. To do this, all claims of efficacy would need to be treated as equally valid. Quality of care and appropriateness of care would become the customer's problem, as in any shopping center in which the customer decides what to purchase and from whom.

Physicians will probably find this analogy and this line of reasoning repugnant, but why? Do we have restraint of trade, or are we withholding means to alleviate suffering merely because we are not the direct provider? Why should not all prospective consumers of health care services have equal access to all services that might be helpful? Why restrict the sale of hospital-based services to physicians? What is so unique about hospital-based care that these services should not be placed in a free market?

Physicians can argue that a lay person cannot gauge the indication, efficacy, and safety of hospital-based services. You can take your shirts to a laundry, see how they come out, and if they don't suit you, go to another laundry when your shirts are soiled again. But you can't return a gallbladder or appendix for another surgery.

Consumers of hospital-based services do make the final decision about the service they receive, usually by deciding to trust the physician's judgment on the basis of credentials or personal knowledge. But a hardware store customer trusts the clerk to tell him what wrench is best to repair a drain. What's the difference between deciding what wrench to buy or whether to consult an orthopedist, a physical therapist, or a chiropractor about a sore back? In this case, physicians would argue that the consumer should be evaluated by the person best qualified to make the diagnosis and to carry out the indicated treatment. This insures that an illness or condition with life-threatening or potentially crippling effects will be detected. When risk to life and function is small, it makes little difference if the patient sees first a person who is only able to diagnose and treat minor musculoskeletal disorders. But that person does not require a hospital to carry out treatment.

It might be argued that if physicians are concerned about the welfare of prospective patients, they can allow all health care providers access to hospital treatment facilities, providing that patients are co-admitted by a physician who will then assume the responsibility for the patient's safety and serve as back-up if the treatment is ineffective or damaging. In the case of a shopping center, the management assumes responsibility for accidents that occur only in common areas outside any individual proprietor's shop. Thus, the shopping center model, while useful for making an analogy to fair trade, is not useful as an analogy for liability. No shopping center manager would be foolish enough to guarantee the wares of his tenants.

State legislators are placing hospitals more and more in the role of shopping centers. Dentists and podiatrists are now being allowed to set up shop in Texas hospitals. Psychologists are pressing for admission privileges. As physicians, what do we care? After all, we can piggyback our services on the services of these providers who are already credentialed by their own organizations and licensed by the state to practice as healers. The more occupants of a shopping center, the greater the traffic and the more the profit for everyone. Here, too, the analogy breaks down. Occupancy of shopping centers by many providers drives prices down through competition. Increasing the number of professions with access to hospital beds can only drive hospitalization costs up by the frequency of inappropriate admissions and the sheer economic drive for providers to render the most expensive care, over and above the need for two or more professionals to care for the patient, instead of one.

The free trade model of hospitals leaves physicians with the responsibility for maintaining the quality of care rendered by professionals they cannot supervise adequately, and the public with inefficient, higher priced hospital care. We physicians must state effectively to our legislators that our aim is not to restrain trade, but to maintain quality of care at a price the public can afford. The place to speak is in our legislature—the path is through our state professional organizations. We need to rally to this cause to prevent the dilution of hospital services to the point that hospitals indeed become shopping centers in which overpriced and poorly rendered services compete with those of well-trained professionals, to the detriment of the public.

MYRON F. WEINER, MD
Department of Psychiatry, UT Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235.

The AMA Hospital Medical Staff Section Ninth Assembly

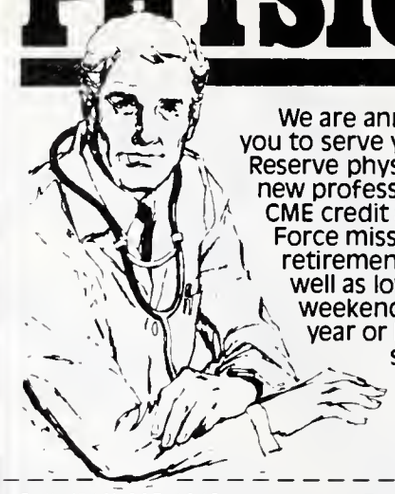
JUNE 18-22, 1987
PALMER HOUSE
CHICAGO

Represent your medical staff.

For Information Contact:

Department of Hospital Medical
Staff Services
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610
Phone (312) 645-4747 or 645-4753

PHYSICIANS



We are announcing opportunities for you to serve your country as an Air Force Reserve physician/officer. You can make new professional associations, obtain CME credit and help support the Air Force mission. For those who qualify, retirement credit can be obtained as well as low cost life insurance. One weekend a month plus two weeks a year or less can bring you pride and satisfaction in serving your country.

Call: (512) 385-1816
Or Fill Out Coupon and Mail Today!

To: Health Professions Recruiting
2610 RRS/RSH
Bergstrom AFB, TX 78743-6002

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Prior Service? Yes ____ No ____

Medical Specialty _____ Date of Birth _____

AIR FORCE RESERVE 10-710-1084

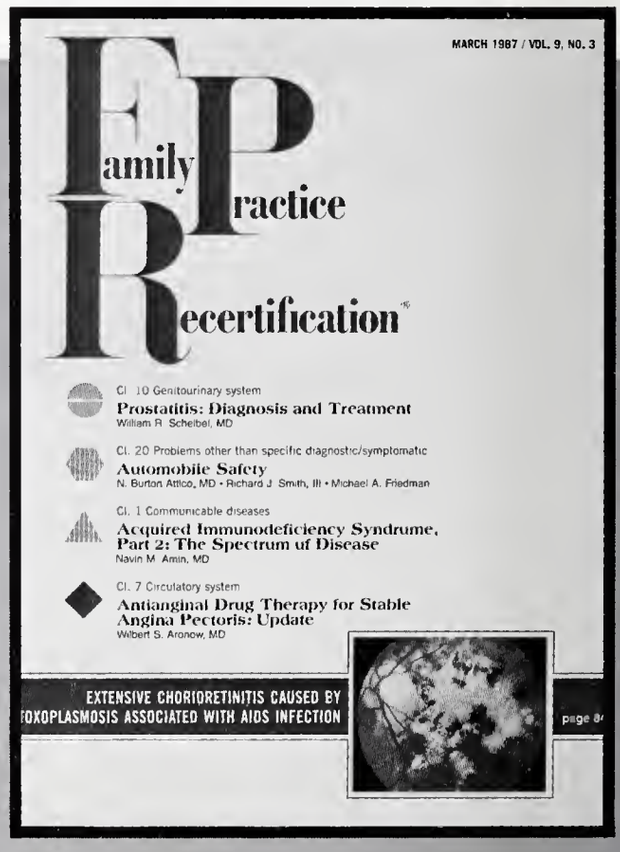
A GREAT WAY TO SERVE

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

  Cardiology — Ob/Gyn
  Diabetes — Psychiatry
  Pediatrics — Gastroenterology

- Provides 20 hours of CME Category 1 Credit


MARCH 1987 / VOL. 9, NO. 3
Family Practice Recertification
Cl. 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Schelbel, MD
Cl. 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Attico, MD • Richard J. Smith, III • Michael A. Friedman
Cl. 1 Communicable diseases
Acquired Immunodeficiency Syndrume, Part 2: The Spectrum uf Disease
Navin M. Amin, MD
Cl. 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD
EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION

PRACTICAL ▪ CLINICAL ▪ EDUCATIONAL ▪ CURRENT

YOU DON'T OFFER A WRITTEN GUARANTEE UNLESS YOU HAVE THE BEST COMPUTER SYSTEM.

Introducing the Reynolds and Reynolds Pledge of Satisfaction.

Before we decided to offer your practice a written guarantee, we made sure we had the best medical practice management system on the market.

Only Reynolds + Reynolds, a Fortune 500 company with over 20 years of computer experience as a single source supplier, offers you:

- State-of-the-art hardware from IBM, NCR, and Texas Instruments.
- The most comprehensive Unix-based medical practice management software in the industry.
- MPMS-PLUS software features:
  - appointment scheduling
  - patient billing
  - accounts receivable
  - insurance claims
  - management reports.
- The industry's most responsive after-sale hardware and software service and support.
- Competitive lease plan rates.
- A full line of computer forms.
- A unique written pledge of satisfaction assuring you that our system will perform the tasks required to help your practice run more profitably and efficiently or your full system price will be refunded.

Whether you're a new buyer or a dissatisfied system user, Reynolds + Reynolds' single source concept is right for you. Interested? To know more about our MPMS-Plus System and our Pledge of Satisfaction, fill out the attached coupon or call us toll-free at 1-800-632-4278 (in Ohio call 1-800-535-7128.)

Reynolds + Reynolds®
P.O. Box 1005
Dayton, OH 45401

Committed To Your Future

Reynolds + Reynolds

Pledge of Satisfaction

Our system will perform the tasks required to help your practice run more profitably and efficiently or your full system price will be refunded.

Yes, I'm interested! I want to know more about the Reynolds + Reynolds® MPMS-PLUS system. To make our first discussion more efficient, I've filled in the information requested below.

I'm considering automating my practice:

☐ Right away. ☐ In six months. ☐ In a year or so.

☐ I'd like to know more about your unique Pledge of Satisfaction.

Name: _____

Practice Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

# of Physicians: ____ Specialty: _____

Role of EEG in evaluating patients with dementia

I wish to congratulate Dr Hutton on his concise and relevant review of the evaluation and treatmcnt of dementia (1). As our society continues to age, this disease entity will become commonplace in most physicians' officcs.

I disagree with one point Dr Hutton makes in his article. He states that electroencephalogram evaluation plays a limited but confirmatory role in the evaluation of patients with demcntia; yet, in thc table on page 21, he placcs it in the *essential* category for the evaluation of a patient with dementia.

The use of the electroencephalogram in the routine evaluation of dementia rcmains a controvcrsial area, with most geriatricians recommending that it be used only when elinically indicated (2). In the current climate of cost containmcnt, we must continue to choose our laboratory cvaluations carefully, especially when the yield is expected to be extremely low, as Dr Hutton implies.

Overall, this was an cxcellent review and my thanks once again to *Texas Medicine* for sensitizing Texas health care providers to the necds of the dcmented population.

DAVID V. ESPINO, MD
Fellow, Department of Geriatrics and Adult Development, Mt Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029.

REFERENCES

1. Hutton JT: Evaluation and treatment of dementia. Tex Med 83(1):20–24, 1987.
2. U'Ren RC: Organic disorders, in Cassel CK, Walsh JR (eds): Geriatric Medicine, vol 1. New York, Springer-Verlag, 1984, pp 553–576.

The author responds

I thank Dr Espino for his kind commcnts with regard to the artiele, "Evaluation and Treatment of Dementia" which appeared in *Texas Medicine* in January 1987. Dr Espino makes an excellent point with regard to the need for cost containment in medicine. Neverthcless, his intcrpretation of the role suggested in our article for EEG is not what was intended. Our article does not state that the EEG is an *essential* test. We do say that EEG is "useful and recommcnded" and can play a confirmatory role in thc evaluation of demented patients.

The question rcgarding the role of EEG in the evaluation of dementia syndrome is timely and deserves further comment. An EEG is a noninvasive, safe laboratory procedure that typically costs about $100. It is a scnsitive but usually nonspecifie indicator of abnormal brain physiology. The value of the proccdure is enhanced by clear questions to the eleetroencephalographer with regard to the purpose of thc study. One question that can be answered is whether the brain wave activity is normal, as would be expected in pseudodementia, or abnormal, as would be expeeted with most primary neurological disorders or secondary encephalopathies. A second answerable qucstion rclates to the degree of abnormality. The primary neurological disorders such as Alzheimer's disease typically are associated with at least mild degrees of slowing, cspecially in the frontotemporal regions, as contrasted with moderate amounts of slowing with most metabolic cncephalopathies.

At timcs the EEG can providc more specific information. For example, periodic complexes are seen in Creutzfeldt-Jakob disease and have become one of the diagnostic hallmarks of this so-called slow virus disease. In hepatic or uremic encephalopathy, the EEG may demonstrate triphasic waves that are quite characteristic. Also the normal EEG typically seen in Pick's disease contrasts to the usually mildly abnormal EEG of Alzheimer's disease and the very low voltage record associated with Huntington' disease. Focal slowing may be an indication of brain tumor, although brain imaging procedures are most dirccl and useful tests for diagnosing space-oecupying lesions. The rare ictal dcmentia caused by nonconvulsive status epilepticus can be confirmed only by EEG (1).

Medieal testing ineluding EEG need not be an all-or-nothing phenomcnon. An cvaluation plan driven by diagnostic considerations rather than batteries of tests is desirable. The listing of useful and recommended tests in the table of our article was not intended to be used for thc cvaluation of cvcry patient with a dementia syndrome. Such tests are capable of identifying potential underlying, specifically treatable forms of dementing illness in a paticnt population of dementia. For examplc, a patient presenting with papilledema, foeal neurologic signs, and progressive confusional disorder would likely be diagnosed with a CT or MRI scan of the head and not by metabolic evaluation. EEG would not bc vcry useful.

The overall message of our article is that paticnts with dementia syndrome deserve appropriate medieal evaluation procedures and should not bc considercd as just being "senile." Dementia syndrome needs to be recognized as a behavioral complex that can be caused by a variety of medical disorders, some of which can be spccifically treated and many of which, at present, cannot. Nevertheless, the era of therapeutic nihilism for the treatment of the dementing illnesses has passed. It is hoped that newer treatments will be forthcoming.

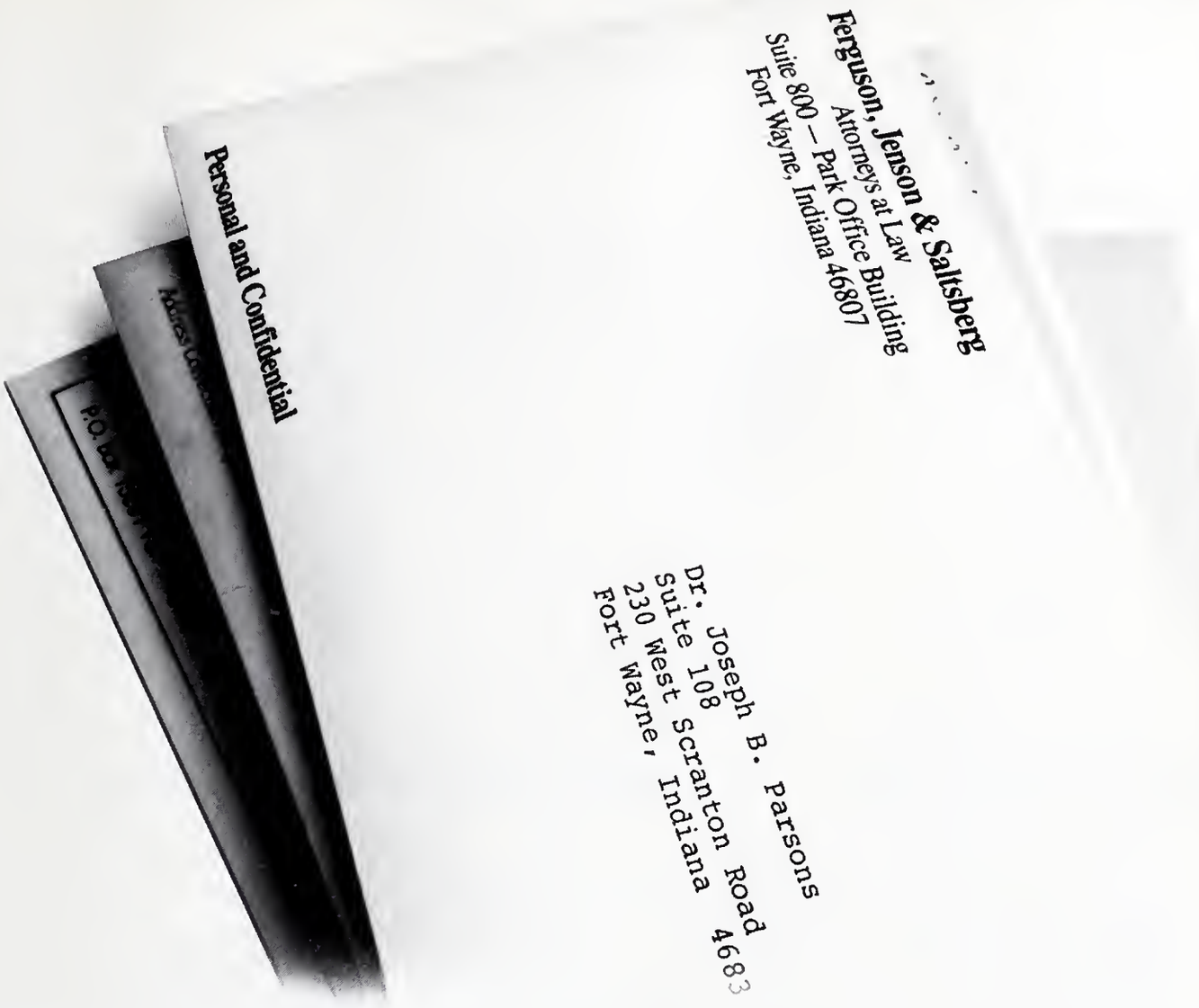
I appreciate the opportunity to have served as guest editor of the January 1987 issue of *Texas Medicine*, and Dr Espino's kind eomments. We hope this issue will benefit the readers of *Texas Medicine* as health eare professionals and society grapple with the escalating problems associatcd with Alzheimer's disease and related dementing disorders.

J. THOMAS HUTTON, MD, PHD
Guest Editor, January 1987 *Texas Medicine* focus issue on dementia, and Professor, Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

REFERENCES

1. Torres F, Hutton JT: Clinical neurophysiology of dementia, in Hutton JT (ed): Neurologic Clinics. Philadelphia, WB Saunders, 4(2):369–386, 1986.

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

READ IT AND REAP!

Cost per $1000 monthly benefit
TEXAS MEDICAL ASSOCIATION
Long Term Disability Insurance

WHAT YOU PAY . . . based on a 30 day waiting period.

Your Age:	Monthly Cost*	Average monthly cost based on your present age for continuous coverage to age 70:
Less than age 30	$ 6.33	$28.79
30–39	7.33	32.00
40–44	14.83	36.11
45–49	21.83	40.37
50–54	30.67	45.00
55–59	47.33	49.78
60–64	52.17	51.00
65 & Over	49.83	49.83

*Payments are made on a quarterly basis. Costs are based on current rates.

WHAT YOU GET . . . at no additional cost:

- ✓ Bonafide long-term benefits for total disability to age 70—through the critical years.
- ✓ Long term benefits for partial disability.
- ✓ Definition of disability protects you at your medical specialty—all ages.
- ✓ Up to $8000 monthly benefits regardless of other disability insurance you may have.
- ✓ Claim payments are not reduced by monies you may receive from other disability policies, salary continuation, investments, Social Security.
- ✓ During partial disability, pre-disability earnings are automatically increased by 6 percent annually to guard against erosion of amounts payable.
- ✓ Your waiting period for partial disability is the same as you select for total disability.
- ✓ Survivor Benefit.

WHAT YOU DO NOT GET . . .

- ∅ Costly frills
- ∅ Termination at 65—during the critical years
- ∅ Lesser benefit period after age 60 (See example, page 10, TMA brochure)

OPTIONAL COVERAGES . . .

- ✓ Cost of Living Guardian
- ✓ In-hospital Disability Income

If you do not have a TMA Insurance Brochure dated August, 1986
Call 1-800-252-9318

Texas Medical Association
INSURANCE PROGRAM
1901 North Lamar Blvd, Austin, TX 78705
underwritten by
PRUCO Life Insurance Company of Texas
a subsidiary of the Prudential

TMA IN ACTION

Advocacy committee supports amendments to peer review law

Texas Medical Association's Physician Advocacy Committee and Emergency Policy Board have agreed to support six amendments to the federal peer review law. TMA's House of Delegates will consider the amendments during its meeting May 14–15, 1987, in Houston.

The amendments would:

1. Allow administrative hearings and judicial review before the imposition of any sanctions. In the case of an "imminent hazard" to the health and welfare of Medicare beneficiaries, the amended statute would allow a special expedited hearing process for immediate action prior to, if possible, or immediately after a sanction decision.

2. Prohibit notice to the public or Medicare beneficiaries of imposed sanctions until administrative and judicial remedies were exhausted, unless "imminent hazard" to the public were demonstrated. In the case of an imminent hazard, notice would be given as soon as an expedited hearing took place and temporary sanctions were imposed.

3. Modify the statutory requirement that peer review organizations recommend sanctions if the PRO determines there is a "gross and flagrant violation" or a "substantial violation" in a number of cases. Rather, the PRO would be required to notify a physician of the violation and offer him or her the opportunity to correct it. Sanctions would be considered if the physician did not make necessary changes in practice patterns.

4. Require the Secretary of Health and Human Services to act on sanction recommendations within 120 days. (The current law permits certain sanction recommendations from the PRO to go into effect automatically if the Office of Inspector General does not act within 120 days on a PRO's sanction recommendation.)

5. Allow providers and physicians the same access to administrative and judicial review as Medicare beneficiaries when adverse utilization determinations are made.

6. Prohibit retroactive application of utilization review and quality assurance standards and requirements. Written notice of new requirements would have to be provided to all providers and physicians 30 days in advance of implementation. Physicians claim that currently, new standards are being applied to treatment rendered prior to the standards being adopted.

TMA President Jim Bob Brame, Eldorado, appointed the Physician Advocacy Committee after the November 1986 meeting of the House of Delegates. The committee has two charges: (1) to serve as a liaison with the Texas Medical Foundation and (2) to advocate physicians' interests in dealings with the government, the Joint Commission on Accreditation of Hospitals, and peer review organizations.

Physicians spending more time pursuing continuing education

The number of hours that physicians spend pursuing continuing medical education (CME) has increased, according to a Texas Medical Association survey. The survey also showed that despite the fact that older respondents took more CME hours, the same group viewed mandatory CME for relicensure and TMA membership less favorably than their younger colleagues.

TMA's Committee on Continuing Education conducted the survey, which was mailed to 2,654 randomly selected members. Of those, 814 returned the survey for a response rate of 31%. The confidence level associated with the survey is 99%, plus or minus 4%.

The respondents indicated that during 1984, they obtained an average of 57 hours of CME. In 1985, that figure rose to 59 hours. For the two years 1984 and 1985 physicians under age 40 obtained an average of 48 hours; physicians age 40–59, an average of 60 hours; and physicians 60 and over, 61 hours.

A breakdown by specialty of the responses shows internists reporting an average of 71 hours of CME per year; general surgeons, 61 hours; psychiatrists, 60 hours; family practitioners, 50 hours; and pediatricians, 46 hours.

Asked if they favor mandatory continuing medical education requirements to maintain a medical license, 66% of the respondents age 60 and over, the group that most often participated in CME, said no. Fifty-one percent of physicians under 40 opposed such a requirement, and 61% of physicians age 40 to 59 opposed it.

Fifty-five percent of all the respondents said no to a CME requirement for TMA membership. Physicians age 40–59 made the strongest showing, with 58% indicating opposing. Physicians under 40 opposed by 53%, and physicians age 60 and above, by 54%.

New service helps physicians establish and develop practice

Designed to help physicians establish, develop, and maintain a successful medical practice, Texas Medical Association's new Medical Market Analysis (MMA) program provides comprehensive information on demographics and health-related resources anywhere in Texas.

Data is divided into three categories: primary zip code area, surrounding zip code area (primary trade area), and the regional trade area (major cities and their rural areas). Each analysis includes demographic data; the number of physicians in the area by primary activity, specialty, and age; availability of hospitals and services; and a list of physicians and hospitals in the region.

The MMA is reasonably priced. A report costs $95 for residents and medical student members, $125 for nonmember residents and students and physician members; $165 for nonmember physicians, and $195 for hospitals and other nonphysician groups.

The association's Committee on Manpower initiated the MMA. Further information and/or a brochure on the program is available from the TMA Department of Medical Education, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704, ext 255.

Handbook offers guidelines for physician intervenors

The Texas Medical Association's Committee on Physician Health and Rehabilita-

tion has updated its *Workbook for Counselors*, which provides guidelines for physician counselors working with impaired physicians. The book, which was first published in 1981, will be available soon from the committee at 1801 N Lamar Blvd, Austin, TX 78701.

The TMA House of Delegates established the Committee on Physician Health and Rehabilitation in 1977 to "identify, strongly urge treatment, and review rehabilitation provided to the impaired physicians within the state of Texas." The committee offers physicians a program of treatment, rehabilitation, and follow-up, while at the same time protecting the public.

There are almost 90 local county medical society committees in operation, with 15 district coordinators available to provide liaison and to facilitate referrals from a hotline that records information from or about physicians who may be impaired. The hotline number is (512)477–5575. All contacts are confidential and are referred to a local committee member who has expertise in the field of substance abuse.

David C. Eiland, Jr, MD, Galveston, chairs the committee. Other members are: Richard L. Weddige, MD, Lubbock, vice chairman; Neal H. Gray, MD, San Antonio; G. Hulse Wagner, MD, Wichita Falls; Guy K. Driggs, MD, Dallas; A. Bryan Spires, Jr, MD, Lubbock; Gretchen L. Mcgowen, MD, Dallas; and Thomas H. Allison, MD, Mabank. Also serving on the committee are student, resident, and TMA Auxiliary representatives and 20 consultants. The consultants include representatives from the Texas State Board of Medical Examiners, Texas Commission on Alcohol and Drug Abuse, and the Drug Enforcement Administration.

"You may call it a 'club,' but handled properly it's an analgesic and a cough suppressant."

Council announces winners of 1987 Anson Jones Awards

Texas Medical Association's Council on Communicaton has announced the winners of the 1987 Anson Jones Award for excellence in health communication to the public. The winners will receive $500 and a certificate during ceremonies at TMA's Annual Session, May 13–17, 1987, in Houston.

The winners in the competition among newspapers are: Leonard Parness, staff photographer, San Antonio *Light*, and Carolyn Poirot, medical writer, and Stephen Rassentoss and Stan Jones, reporters, Fort Worth *Star-Telegram* (major market daily newspapers); Denise Gamino, reporter, *Austin American-Statesman*, and Kim Phelan, Amarillo *Globe-News* (daily newspapers all other cities); and Mary Alice Rogers, assistant editor, *Lewisville News* (weekly, biweekly, or semiweekly newspapers).

Don W. Millsap, editor, *Texas Eastman News*, a publication of the Texas Eastman Company, Longview, is the winner in the category of company, employee, association, chamber, or trade publications; Joseph Nocera, former senior editor, *Texas Monthly*, Austin, is the winner among consumer and general interest publications.

The winners in the competition among broadcast media are Carolyn Mungo, anchor/reporter, KLBJ-AM, Austin (mid to small market radio stations); Angela Vierville, medical reporter, KSAT-TV, San Antonio (major market television stations); and Larry Elliott, medical editor, KAMC-TV, Lubbock (all other television stations).

The judges also awarded 24 citations of merit.

The 1987 Anson Jones competition attracted 114 entries, with 82 of those in newpaper categories (an increase of 16 over the previous year) and 32 in broadcast categories (6 fewer than last year).

HEALTH LINE

FDA asks customs officials to block Redotex supplies

At press time, the US Food and Drug Administration had issued an import alert asking customs officials to block all supplies of the Mexican diet pill Redotex crossing the Mexico-United States border. At the same time, health officials were investigating several deaths and psychiatric conditions to see if they were caused by the Mexican diet regimen. According to the Texas Department of Health, at least three deaths of persons using the pills have been reported.

The FDA's Dallas District reported that clinics in Nuevo Laredo, Mexico, were selling the drug, which appears to contain a hormone used to speed metabolism, two stimulants, a laxative, and the tranquilizer diazepam. The FDA's Center for Drugs and Biologics (CDB) labeled the combination an "irrational" one that can cause "serious and potentially fatal adverse reactions, including alteration of metabolic rate, increased heart rate, lowering or increasing of blood pressure, loss of body electrolytes, and confusion and hallucinations."

Mexican officials assured the FDA that "all the obesity clinics have been closed, a warning has been issued on television, and an effort is being made to have Redotex reformulated."

FDA Commissioner Frank E. Young, MD, PhD, responded to Dr Mario Lieberman, general director of health inputs for the health secretariat of Mexico, saying, "I am certain that your appearance on (Mexican) national television contributed greatly to informing the general public of the dangers associated with this type of weight reduction treatment and consequently served as a deterrent to individuals seeking such treatment."

TDH publishes directories of AIDS information

Two resource directories dealing with acquired immune deficiency syndrome (AIDS) are available through the Texas Department of Health.

140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
In mild to moderate hypertension
THE FIRST ONCE DAILY
CALCIUM CHANNEL BLOCKER...

NEW
ONCE DAILY

ISOPTIN® SR*

(verapamil HCl/Knoll)

240 mg scored, sustained-release tablets

JAMES B.
38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

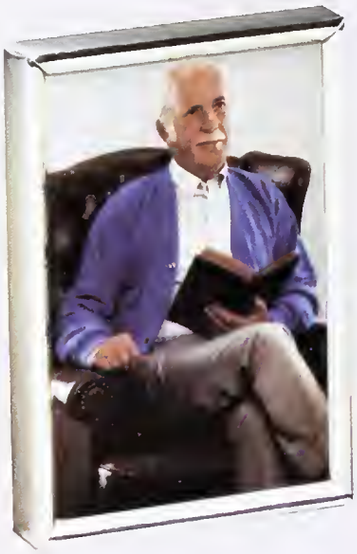
YOUR CONCERNS
Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
— Beta blockers may increase the likelihood of bronchospasm.

ALICE W.
65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS
She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
— Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.



THOMAS G.
70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS
Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
— Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.
42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS
Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN does not cause urinary urgency.
— Unlike either beta blockers or diuretics, ISOPTIN will not adversely affect his already seriously compromised lipid profile.
— Unlike with propranolol, fatigue and impotence are rarely reported.

Antihypertensive therapy you and your patients can live with

*A product of Knoll research.

© 1986, BASF K & F Corporation

2538/2-87

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

knoll®

Printed in U.S.A.

Please see adjacent page for brief summary.

In mild to moderate hypertension
THE FIRST ONCE DAILY CALCIUM CHANNEL BLOCKER

Brief Summary

ISOPTIN® SR (verapamil HCl/Knoll) 240 mg scored, sustained-release tablets

CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS), 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock, 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. Hypotension: ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. Elevated Liver Enzymes: Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. Accessory Bypass Tract (Wolff-Parkinson-White): Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. Atrioventricular Block: The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. Digitalis: Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. Antihypertensive Agents: Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. Quinidine: In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. Nitrates: The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. Cimetidine: Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. Anesthetic Agents: Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. Carbamazepine: Verapamil may increase carbamazepine concentrations during combined therapy. Rifampin: Therapy with rifampin may markedly reduce oral verapamil bioavailability. Lithium: Verapamil may lower lithium levels in patient on chronic oral lithium therapy. Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. Pregnancy (Category C): There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. Nursing Mothers: ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. Pediatric Use: Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

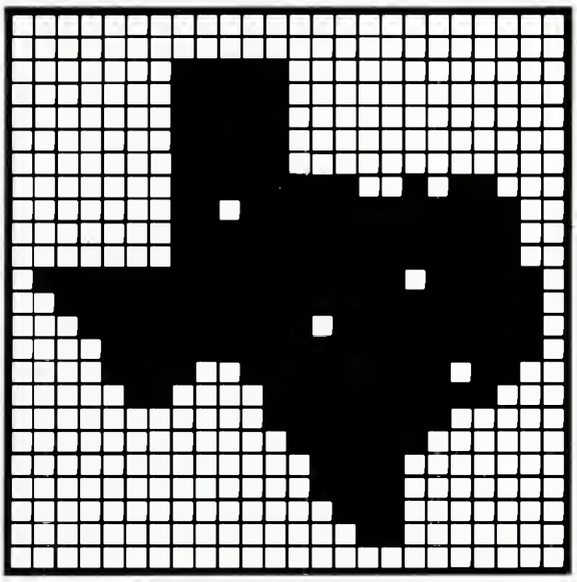
Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

knoll®

BASF Group

©1986, BASF K&F Corporation 2474/11/86 Printed in U.S.A.

Medical Market Analysis



Expanding, Establishing or Relocating . . .

The Texas Medical Association Medical Market Analysis (MMA) can assist you in making the right decisions about your practice.

The TMA MMA can determine:

- The population of an area.
- The demographics of the resident population.
- The number of physicians located in an area and their specialties
- The availability of hospital facilities in the area.

You select a location and we will produce a report providing three levels of analysis—a single zip code area, primary trade area and regional trade area.

Data included in the report has been developed from the licensure files of the Texas State Board of Medical Examiners, the directory of the American Hospital Association with demographic data provided by CACI, Inc., a nationwide market research firm.

FOR ADDITIONAL INFORMATION, contact the Texas Medical Association Department of Education & Research 1801 North Lamar Blvd, Austin, TX 78701 512/477-6704

The *AIDS Referral Directory* was produced by the TDH Bureau of Epidemiology and is intended for use by physicians, hospital staffs, public health agencies, and private agencies seeking consultations and/or referrals of patients having or suspected of having AIDS.

The *Community Resource Directory* was produced by the Public Health Promotion Division to assist individuals and agencies in identifying community resources for AIDS information and services across Texas.

Requests for these directories should be directed to the Texas Department of Health, Bureau of Epidemiology, AIDS Surveillance, 1100 W 49th St, Austin, TX 78756–3199.

Immunization schedule for children revised

The schedule for active immunization of normal infants and children has been revised, according to *Texas Preventable Disease News* (vol 47, no 6). Until the revision, the recommended schedule called for administering combined measles-mumps-rubella (MMR) vaccine at 15 months and giving the fourth dose of diphtheria and tetanus toxoids and pertussis vaccine (DTP) and the third dose of oral poliovirus vaccine (OPV) at 18 months. Two visits were needed to receive these vaccines in the second year of life, because the safety and efficacy of administering all three simultaneously had not been proven. (The Texas Department of Health notes that simultaneous administration of MMR, DTP, and OPV previously was recommended for children who were behind schedule in receiving their immunizations. This was based on the demonstrated safety and efficacy of other vaccine combinations.)

A large, randomized, double-blind trial has been completed, and sufficient data are now available to recommend the simultaneous administration of MMR, DTP, and OPV to all children 15 months old or older who are eligible to receive these vaccines.

Implementation of the revised schedule is expected to result in at least three benefits: (1) a decrease in the number of health care provider visits required for immunization during the second year of life; (2) an accompanying decrease in costs; and (3) an increase in the percentage of children who will be fully or partially immunized by 24 months of age.

Some health care providers may prefer to continue administering MMR at 15 months followed by DTP and OPV at 18 months, especially for patients who are known to be compliant with health care recommendations or if other purposes are served by the additional visit.

The new schedule will be included in revisions of the "Suggested Schedule for Routine Immunizations in Public Health Clinics in Texas" (form #6–106), which will be available from the Texas Department of Health.

SOCIOECONOMICS

AMA members get discount on insurance claim forms

The American Medical Association is offering its members a 20% discount on the purchase of all versions of the AMA Health Insurance Claim Form (HCFA-1500). The AMA claim form is required for use by Medicare, CHAMPUS, and most Medicaid state agencies, including the Texas carrier. It was designed by the Health Insurance Claim Form Task Force, of which the AMA is a member and the only claim form provider.

Members who order the claim forms directly from the AMA also receive a free, fully-detailed instruction booklet, which illustrates the proper use of claim forms for a variety of health insurance programs. In addition, a continuous version of the AMA claim form without the Kodak bar-code (OP 505) has been reintroduced for those providers who routinely have used the space in the upper left-hand corner of the form to print the names and addresses of insurance companies.

The AMA claim form may be purchased by nonmembers at the following prices:

Single sheets, bar-coded (OP 501, carton of 1,000), $34.10;

Two-part snap-out, bar-coded (OP 502, carton of 1,000), $49.50;

Two-part computer pinfeed, bar-coded (OP 503, carton of 1,000), $51.75;

Two-part computer pinfeed, no bar-code (OP 505, carton of 1,000), $51.75.

When sending their orders, AMA members should reduce the amount of their checks by 20% to take advantage of the discount. All shipping and handling charges have been calculated into the applicable price. Inquiries and orders should be directed to: AMA Insurance Form, Book and Pamphlet Fulfillment, American Medical Association, PO Box 10946, Chicago, IL 60610, phone (312)280–7168.

VISA and MasterCard orders may be placed on the AMA's toll-free number: 1–800–621–8335.

CHAMPUS alerts providers on participation directories

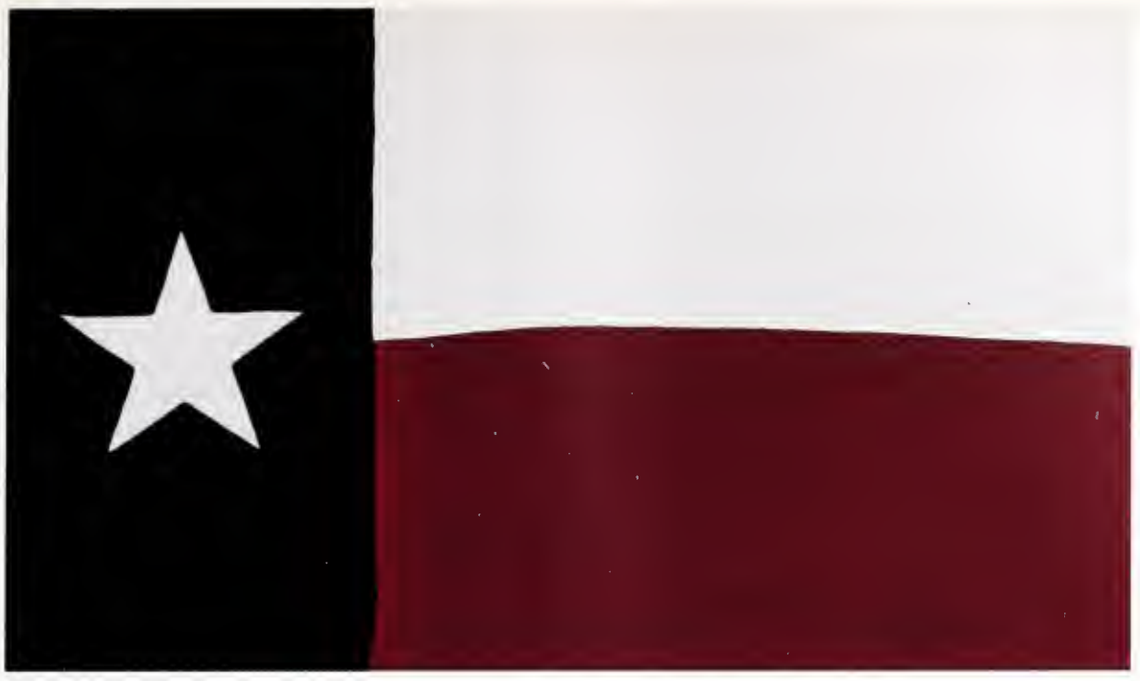
The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) advises health care providers that some private companies are publishing unofficial provider directories, which may be represented as official CHAMPUS publications. These directories receive no sanction from the federal government and do not entitle advertisers to payment for medical care provided to CHAMPUS beneficiaries.

While CHAMPUS does encourage providers to participate (accept the CHAMPUS-determined allowable charge as payment in full), the agreement to participate exists only when the provider signs the CHAMPUS claim form and indicates that he or she will participate. The agreement to participate is done on a case-by-case basis. Advertising in a directory published by a private firm with no government affiliation does not constitute an agreement to participate.

CHAMPUS cautions providers that representatives of private publishing firms who may claim affiliation with CHAMPUS or who imply that an advertisement in a directory entitles a provider to CHAMPUS authorization are in error. No publishing firm has the authority to certify providers for CHAMPUS coverage.

Providers who have questions about the directories listing CHAMPUS providers should call the CHAMPUS Information Office at (303)361–3800.

State flag of Texas



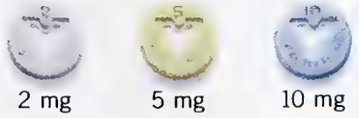
Flag It.

To complete your prescription,
be sure to sign on the right,
on the "Dispense As Written" line.
This "flags" both pharmacist and patient
that you want the *brand* to be dispensed.
And it protects your decision.

VALIUM®

brand of
diazepam/Roche®

scored tablets



2 mg 5 mg 10 mg

The one you know best.

The cut out "V" design is a registered trademark
of Roche Products Inc.

Copyright © 1987 by Roche Products Inc.
Manati, Puerto Rico 00701. All rights reserved.
ROCHE®

Texas reps join cosponsors of concurrent resolution

At press time, 14 of Texas' 27 Congressional representatives had agreed to cosponsor House Concurrent Resolution 30. The resolution expresses dissatisfaction with a Presidential budget proposal that would use diagnostic related groups (DRGs) as the basis of payments for radiology, anesthesiology, and pathology services to Medicare patients. As of March 27, 1987, the resolution had 222 supporters from 46 states and Puerto Rico in the US House of Representatives. A companion resolution in the US Senate, Senate Concurrent Resolution 15, had 29 of the necessary 51 sponsors that would constitute a majority.

The Texans cosponsoring the House version were Reps Jim Chapman (D-Sulphur Springs), Bill Archer (R-Houston), Jack Fields (R-Humble), Charles W. Stenholm (D-Stamford), Lamar Smith (R-San Antonio), Tom DeLay (R-Stafford), Beau Boulter (R-Amarillo), Albert Bustamante (D-San Antonio), Ronald Coleman (D-El Paso), Larry Combest (R-Lubbock), Marvin Leath (D-Waco), John W. Bryant ((D-Dallas), E. "Kika" de la Garza (D-Mission), and Max Sweeney (R-Wharton).

If adopted, the resolution would not have the force of law, but it would put Congress on record as opposing either a physician DRG or mandatory assignment of all Medicare claims.

The American Medical Association drafted the resolution, which was introduced in the House Jan 22, 1987, and in the Senate Feb 5, 1987. Texas Medical Association voiced official support of the resolution through the association's executive board, during a meeting Feb 8, 1987. The resolution reads:

"Whereas, the President, as part of his budget proposal for fiscal year 1988, seeks to fold Medicare physician payments for Radiology, Anesthesia and Pathology services into Diagnostic Related Group (DRG) payments; and

"Whereas, the current Medicare reimbursement system for hospitals under the Medicare program that pays hospitals a certain amount per discharge based on diagnosis (the DRG system) has raised serious concerns about the quality of care now available to Medicare patients; and

"Whereas, the General Accounting Office has reported to the Congress that Medicare patients are being discharged from hospitals 'quicker and sicker'; and

"Whereas, there exists inadequate evidence that such a reimbursement system would produce significant budget savings or could be implemented without sacrificing both quality of care and access to care, particularly with regard to rural areas; and

"Whereas, implementing a physician DRG system would in all likelihood necessitate incorporating mandatory acceptance of assignment of Medicare benefits resulting in the inequitable distribution of services and compensation; and

"Whereas, mandatory acceptance of assignment for physician services has been expressly rejected by the Congress; and

"Whereas, in the Omnibus Budget Reconciliation Act of 1986 (PL 99–509) the Congress has instructed the Secretary of Health and Human Services to study and make recommendations concerning the feasibility and practicality of modifications in the reimbursement system under Medicare for services provided by radiologists, anesthesiologists and pathologists to Medicare hospital inpatients, such report due on July 1, 1987; and

"Whereas, the Congress has established the Physician Review Commission to study, review and report recommendations back to it regarding modifications in reimbursement of physician services under the Medicare program, such Commission having just completed its first three meetings; and

"Whereas, the Congress has also mandated the Secretary of HHS to undertake a study directed at securing rational, lasting Medicare physician payment reform through a comprehensive and systematic examination of the resource costs of medical care in order to implement a Relative Value Scale for physician payment by 1989; now therefore be it

"Resolved by the House of Representatives (the Senate concurring), That it is the sense of Congress that

"1. a program for Medicare physician payment based upon Diagnostic Related Groups and/or Mandatory Assignment is neither feasible, nor desirable; and

"2. any drastic alterations of Medicare's payment methodology should not be undertaken without benefit of the re-

TMA President Jim Bob Brame, MD, Eldorado, (seated at microphones) discusses the need for tort reform before the Senate Economic Development Committee Monday, March 2, 1987. Dr Brame and other supporters of tort reform presented their arguments to the House State Affairs Committee Monday, March 23.

sults of the Relative Value Scale study mandated by the 99th Congress and detailed analysis of the long range impact of such change on quality and access to care."

Peer review activities safe from antitrust action

Physicians may participate in good faith peer review activities without fear of violating antitrust laws, according to a representative of the US Department of Justice, Antitrust Division. The opinion supports protections put forth in the Health Care Quality Improvement Act of 1986, signed into law Nov 14, 1986, and the decision of the Ninth Circuit, US Court of Appeals in *Patrick v Burget.*

At the request of the American Medical Association's office of general counsel, Acting Assistant Attorney General Charles F. Rule addressed the question, "Do good faith peer review activities designed and reasonably conducted to prevent incompetent physicians from obtaining or maintaining staff privileges violate the antitrust laws?" Mr Rule responded in a letter dated Dec 2, 1986.

He emphasized that peer review must employ fair procedures and meet "other specified standards." He added, "Indeed, only in the exceptional circumstance where the peer review process is not used to review individual competence but rather is a sham used to exclude a competent practitioner or group of practitioners from the market and thus to restrain competition, would an antitrust violation ever exist."

Mr Rule concluded, " . . . the antitrust laws do not stand in the way of physicians' participation in hospital peer review conducted to identify and restrain incompetence in the provision of health care. To the contrary, because such peer review enhances both the quality and efficiency of the services delivered in our nation's hospitals to the benefit of consumers, it furthers the antitrust goal of fostering competition in the health care marketplace."

AMA Executive Vice President James H. Sammons, MD, observed, "As physicians, we have an obligation to be an integral part of this process. With the new federal legislation and this official position of the US Department of Justice, obstacles to physician participation have been removed."

AMA identifies priorities in legislative arena

The American Medical Association has identified six top legislative priorities: physician reimbursement (including physician diagnosis related groups payment system, Medicare fee controls, and mandated assignment), tobacco issues, campaign finance reform, professional liability, support for biomedical research, and unrelated business income tax.

"For physician reimbursement, we are marshalling an unprecedented effort to defeat the administration's MD/DRG proposal," according to an association communication. For the first time, the AMA has hired an outside lobby firm to augment AMA, state, and specialty society efforts.

The AMA will be working on other issues in addition to the top six. Catastrophic health insurance, professional self-regulation, AIDS, peer review issues, and Medicare reform are among those issues. In the area of Medicare reform, the association supports reforms designed to eliminate the yearly set of drastic cuts that Congress has imposed. The program calls for individual responsibility and choice, with prefunding to assure future benefits.

The association notes, "To meet these challenges, we have a strong commitment to working with the state, county, and specialty societies to improve our grassroots physician response . . . . While the Congressional climate appears to be discouraging, with your assistance, we can achieve positive results. We have the mechanisms in place to make our views known and to have these views accepted. The AMA will continue to address each new challenge that faces medicine in the Congress so that physicians will be able to continue to provide quality care to their patients."

NEWSMAKERS

JOHN P. McGOVERN, MD, Houston, a past president of the American College of Allergists (ACA), has been honored by the creation of the John P. McGovern Society by the ACA. Dr McGovern is the founder and chief consultant of the McGovern Allergy Clinic and is chairman of the boards of the Texas Allergy Research Foundation and the John P. McGovern Foundation.

DUKE S. SAMSON, MD, professor and chairman of the division of neurosurgery at The University of Texas Health Science Center at Dallas, was named the initial holder of the William Kemp Clark Chair in Neurological Surgery. The chair was established by the UT System Board of Regents to honor Dr Kemp Clark, professor and former chairman of the neurosurgery division. Dr Samson, a member of the Southwestern Medical School department of surgery faculty since 1975, is researching brain blood flow, acute stroke, and spasm of cerebral vessels.

RICHARD WARREN SMALLING, MD, a cardiologist and associate professor at The University of Texas Medical School at Houston, has been named one of four recipients of the 1986 Outstanding Young Texas Exes Award by The University of Texas at Austin.

"Here comes the baby doctor now."

Is your malpractice insurance geared to the past, instead of the future?

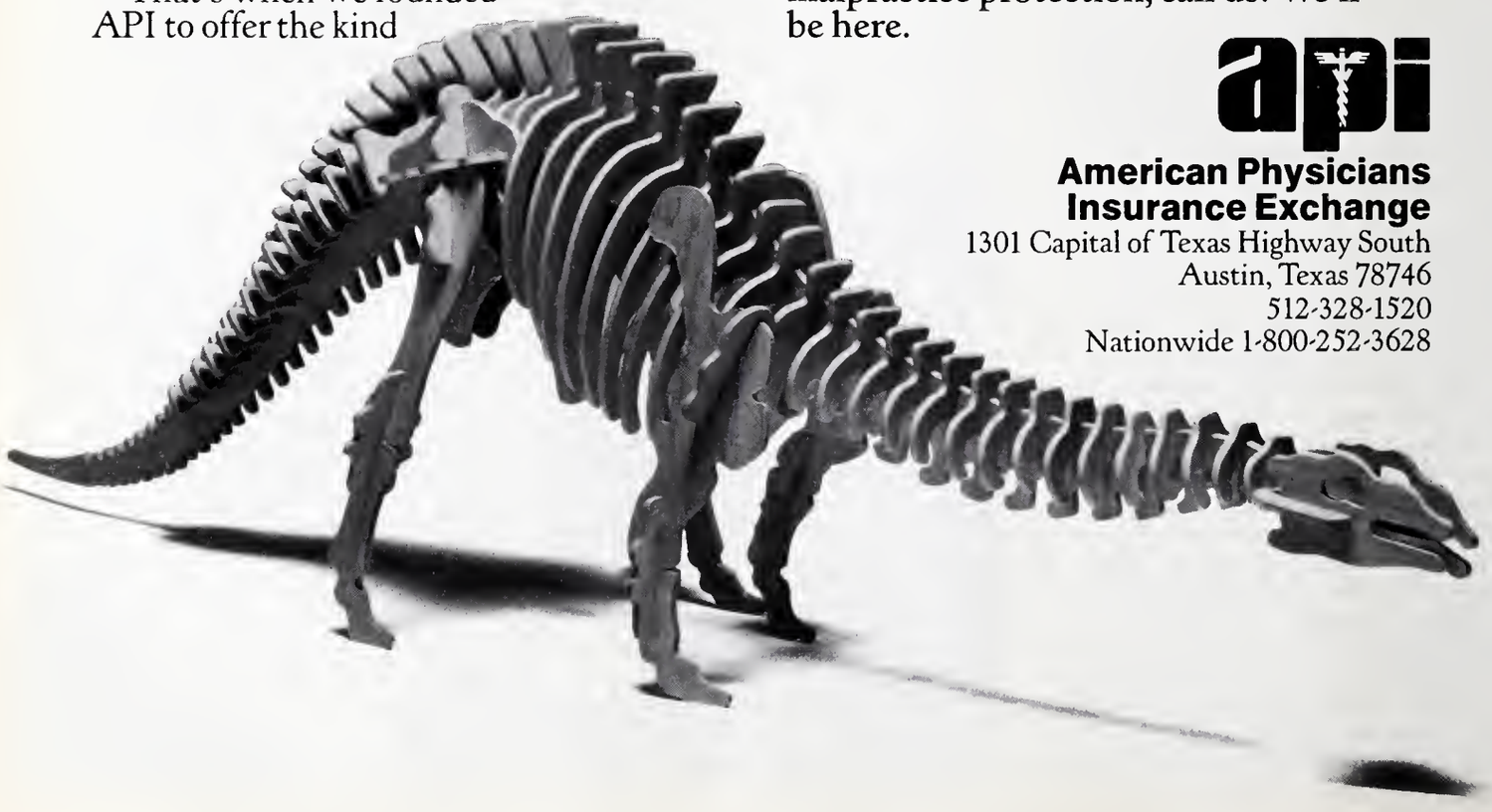
Protecting today's physicians from the onslaught of malpractice litigation is a new game. Back when malpractice lawsuits were rare, old insurance companies sold malpractice policies to just about anyone. Cheap.

Then the malpractice crisis of 1975 appeared—and the new age of malpractice protection arrived. Some of the old insurance companies knee-jerked away from their commitment to Texas and Arkansas physicians.

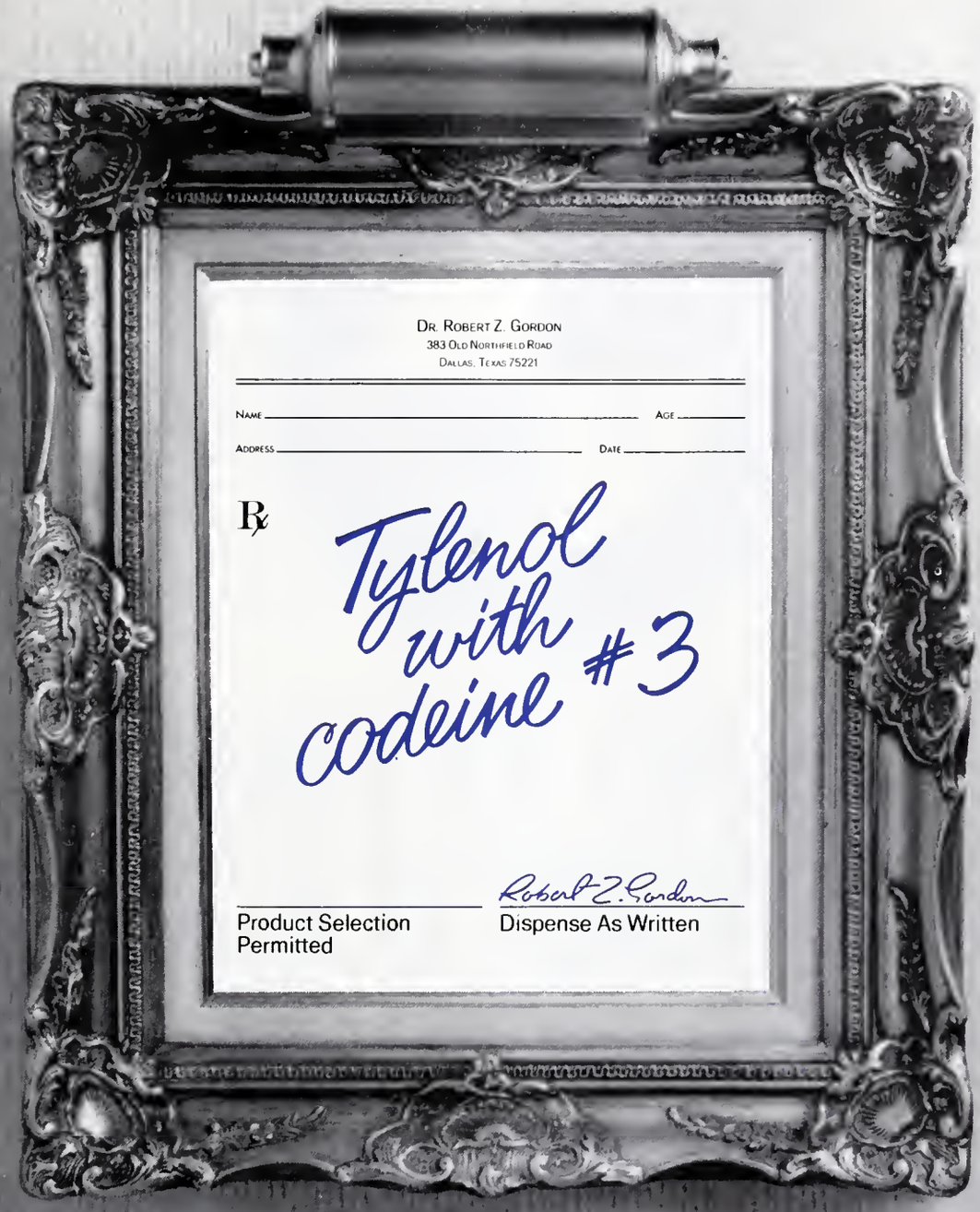
That's when we founded API to offer the kind of complete protection that the old insurers didn't offer. For all specialties. With ample limits. API plans to offer this complete protection in 1995, 2005 and beyond. Modern, complete insurance coverage must adapt to change. And in malpractice insurance, complete protection is all that counts.

You don't have to settle for less. API guarantees complete protection for today and the future.

When you're ready for complete malpractice protection, call us. We'll be here.



American Physicians Insurance Exchange
1301 Capital of Texas Highway South
Austin, Texas 78746
512-328-1520
Nationwide 1-800-252-3628



CREATE A SIGNED ORIGINAL

to be sure your patients get...

Tylenol®

ACETAMINOPHEN

with codeine phosphate

TABLETS C-III ELIXIR C-V

Tablets: Contain Codeine Phosphate*: No. 3—30 mg; No. 4—60 mg—plus Acetaminophen 300 mg.
Elixir: Each 5 mL contains 12 mg Codeine Phosphate* plus 120 mg Acetaminophen (Alcohol 7%).
*Warning: May be habit forming.

© McNEILAB, INC., 1987

TYCT 6445-A

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

JUST ARRIVED:

1987 325 Convertible

The first BMW Convertible offered in over three decades. Its 168-h.p. engine has 39% more power than 1986 3-series.

JUST ARRIVED:

1987 7-Series

An entirely new luxury sedan for 1987. From its aerodynamic exterior to its hand-sewn leather interior, this car's impact will be measured in decades, not years.

JUST ARRIVED:

1987 M-Series

The three new M-Series BMW's represent the two fastest production sedans available in the U.S., (M3 and M5), and a limited edition sports coupe (M6) with such features as a hand built 256-h.p. engine and hand tuned suspension.

Over 150 new BMW's to choose from. All with ABS brakes and 3 year/36,000 mile warranty.

The New B M W

BMW CENTER

FACTORY AUTHORIZED.

4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

EDWARD N. BRANDT, JR, MD, PhD

Indigent health care: a continuing dilemma

Health care for the indigent has been accomplished in a variety of ways throughout the history of the United States. In this century, it was largely the responsibility of churches or charity hospitals staffed by medical school faculty. Recent cost escalations have made indigent care a significant problem requiring other approaches. The state and local governments must take the lead since the organization of delivery systems and laws vary from state to state. Federal legislation, specifically the block grants, have made this easier for the states. A variety of possible solutions have been identified including the Texas Indigent Health Care and Treatment Act.

Edward N. Brandt, Jr, MD, PhD, Chancellor, The University of Maryland at Baltimore, 520 W Lombard St, Baltimore, MD 21201.

The issue of indigent health care dates back to the beginning of recorded history, especially if one considers health care to be but one aspect of meeting the total needs of the poor. Yet, it remains timely and important, and the medical profession must lead the way in resolving the issue in the light of today's realities.

Much of the discussion and debate about indigent health care is clouded by a lack of definitions. Hence, people apparently disagree, but often it's because they are not talking about the same thing. Let me offer you my definitions:

Indigent—The indigent include those who are in need in all spheres of life, including food, clothing, and other necessities. Health care is simply one aspect of their need.

Marginally Indigent—These are the people who are unable to meet unplanned or particularly large expenses. Some refer to these people as medically indigent. This group includes the "under-insured"; that is, those who do not have enough insurance to meet large expenditures, and frequently includes the "working poor" who, in most studies, are underinsured or, in some instances uninsured. Marginally indigent also includes the uninsured who are capable of providing most of their needs, but do not carry health insurance.

In Matthew 26:11 is found the following phrase, "For ye have the poor always with you." Even in the *Old Testament*, one finds frequent mention of the poor. Certainly throughout the history of the United States, all levels of government and charitable organizations have given attention to relief of the sufferings of the poor. Until the end of World War II, health care to the indigent was delivered largely by charitable organizations, especially churches, and public or charity hospitals supported by local taxes. Physicians donated their time to the care of these people, and other costs were paid by donations or by increasing the rates to those capable of paying—a practice now known as "cost-shifting." Indigent health care was considered to be a local matter and was dealt with by city governments or, in the rural states, by state governments. However, in the 1940s and especially in the 1960s, the federal government entered this scene.

Factors influencing health care system

One can think of the factors influencing the health care system as a triad of access, quality, and cost. This is a convenient mechanism for discussions of indigent health care.

Our society paid little attention to any aspect of the health care system until the release of the Flexner report (1), which was commissioned by the American Medical Association. This report condemned the quality of the health care system and blamed most of the poor quality on inadequately educated physicians. It recommended that many medical schools be closed, and that they be replaced with university-based medical schools that emphasized research and other scholarly activities. As a result of the Flexner report, medical education changed dramatically. Many "medical schools" were closed and universities began to develop scholarly based medical education. This trend continued throughout the 1920s, and in the 1930s a system of medical schools that were affiliated with, or a part of, universities had been developed.

A second goal was accomplished by these changes. Most of the medical schools either operated or were affiliated with charity hospitals. Hence, not only were students receiving a better education, but the indigent were also receiving care. Admittedly, that care was largely delivered by the equivalent of modern day residents. However, these young physicians were being supervised by the better practicing physicians in the communities and, therefore, a level of quality was established that had never before been achieved for indigent people. Unfortunately, little other attention was paid to improving the quality of care during this period. There was a fragmentary publicly funded research effort, but most research was performed by philanthropic organizations such as the March of Dimes and similar entities.

Following World War II, the situation changed. During that war, a great deal of medical research was commissioned by the military to assist in the care of battlefield injuries. Such things as the use of blood plasma, better methods for storing blood, and even the use of antibiotics came about during this period. When physicians returned from the military, they found that the tools that they had been using were not available in civilian practice, and they began to push for improvements. In addition, because of the advances in surgery and generally in the care of the ill in hospitals, they began to demand more and better hospital beds. This culminated in the pas-

sage of the Hill-Burton Act, which instituted a loan fund to enhance the construction of hospitals, especially in needy areas, as well as other health care facilities. These loans could be repaid in cash or by providing care to the indigent. Again, this legislation was designed to accomplish two goals: first to improve quality and second, to improve access to health care for all people, including the indigent.

During the 1950s, the federal government's attention was directed toward improvements in quality by enhancing research and education. The National Institutes of Health flourished and grant programs were expanded to stimulate research. Furthermore, training programs were set up to educate people in the various medical specialties. However, the great involvement of the federal government occurred in the 1960s. First, there were massive extensions of this country's research efforts, largely through the National Institutes of Health, and an expansion of the physician population through increases in class size of existing medical schools and an increase in the number of medical schools. The output of physicians by the 1980s had doubled and comparable percentages were true of other health professionals including dentists, nurses, and others. Medical schools constructed or remodeled research facilities, and entire new specialties were developed. Again, most of this activity centered around hospitals providing care to the indigent. Hence, the quality of care being rendered to the indigent improved dramatically although there were still questions about the extent of access. However, access was a problem not only for indigents, but for other persons as well, especially in the rural areas. Let me emphasize that there are two aspects to the access issue: The first is access to any health care, and the second is access to all that modern medicine has to offer.

Clearly, the largest step taken was the passage of Titles XVIII and XIX of the Social Security Act, establishing Medicare and Medicaid. These two acts are quite different. In the first place, Medicare is an entitlement that is extended to all persons who qualify for Social Security benefits. It is principally aimed at persons over 65 because in 1965 they tended to be at least medically indigent. Hence, at least a part of the justification was to meet the needs of the marginally indigent. Medicare was intended to be, and is, solely a federal program, administered centrally, and using standard benefit packages applicable throughout the country. On the other hand, Medicaid was designed as a federal-state partnership. The federal government appropriates funds that the states have to match. This matching formula varies from state to state and is dependent, at least conceptually, on the wealth of the state. States that are less able to care for their indigent receive a greater proportion of federal dollars than do states that are deemed better capable of caring for their poor.

It is important to emphasize the differences between these two. With Medicare, the federal government sets the standards for eligibility, benefit packages, and the methods for payment. With Medicaid, eligibility requirements are set by the state based upon a minimum set determined by the federal government, and benefit packages and method of payment are largely controlled by the states. Furthermore, states can opt to participate in all, a portion, or none of the Medicaid program. For example, until 1982, Arizona had no Medicaid program at all. Other states who had forms of indigent care, such as Oklahoma, used Medicaid to supplement their state programs.

The passage of the Medicaid legislation raised the need for definition of who is indigent. As you know, there is a relatively complex formula that takes into account assets, earnings, family size, and other variables to determine minimum eligibility for Medicaid coverage. Again, exact eligibility requirements vary somewhat from state to state, so that if one considers the federally established poverty level, states vary as to the proportion of people below that line that they cover through their Medicaid programs. It is my understanding that, as of now, New York covers the largest percentage while Arizona covers the smallest.

Medicare and Medicaid changed the face of medicine dramatically. In the first place, they introduced a form of regulation of the practice of medicine that had never been seen before. At the same time, however, they provided funds to physicians and hospitals for the care of patients for whom those same physicians and institutions would have provided care anyway. Furthermore, they also changed many standard practices by limiting cost-shifting and by implementing at least pseudo-fee schedules.

There is no question in my mind but that Medicare and Medicaid were seen as only a first step towards a program of universal or national health insurance, whereby the federal government would assure total reimbursement for the health care of all citizens of the country. For a number of reasons, such legislation was never enacted, although numerous people ran for office on that platform. Instead, in the 1970s, a variety of special programs were enacted to try to fill gaps in Medicaid coverage or otherwise provide care to persons deemed by the Congress to need care. Such things as the National Health Service Corps, Community Health Centers, Community Mental Health Centers, Family Planning, and a whole host of others were created during the late 1960s and the 1970s. Indeed, when I arrived in Washington in 1981 as Assistant Secretary for Health of the US Department of Health and Human Services, the United States Public Health Service

was administering 89 separate health care programs, many of which had varying levels of eligibility and varying requirements as to the type of care delivered. Although I believed at the time that much of this had been brought about by regulation, I soon learned that it had been effected by a combination of legislation and regulation. It was virtually impossible to bring these programs together to provide any semblance of comprehensive medical care for those needing it—since each program tended to operate independently, leading to what many believed to be increased and unnecessary costs. In 1981, the Block Grants were created, resolving most of these separate programs into three grants to be made to the states. This action, coupled with contracts for the placement of National Health Service Corps officers, Community Health Centers, and Family Planing centers permitted states for the first time to be able to integrate their care of the indigent using Block Grants, Medicaid, and the contract route for the other three programs. It was hoped that states would use this opportunity to implement good comprehensive health care programs for the indigent of their state. To some extent, that has been accomplished, but not as completely as was originally planned. I should point out here that there are two other systems of care sponsored by the federal government that provide health care services to large numbers of indigents. Those are the Veterans Administration and the Indian Health Service. Indeed, in the Baltimore VA Hospital, approximately 70% of the patients have no insurance and are unable to pay for their health care.

The situation today

What is the situation today? First, according to the latest data from the Health Care Financing Administration, there are 22.3 million people in the United States eligible for Medicaid. Medicaid expenditures for fiscal year 1986 are estimated to be $24.6 billion in federal funds and $23.4 billion in state funds for a total of $48 billion, while the appropriations for Health Block Grants is $1 billion in fiscal year 1986. In addition, approximately 15% of Medicare recipients are also eligible for Medicaid. In those instances, Medicaid pays the co-insurance and deductibles while Medicare pays the rest.

One of the difficulties engendered by these overlapping federal programs has been the issue of which program is responsible. In a time of budget tightening, the issue of the indigent Medicare-eligible veteran becomes a topic of debate. Should Medicare pay for those persons who are otherwise eligible for veterans care? Similar comments can be made for Medicaid and the Indians. Which federal program is to be the payor of last resort? These issues are not clear.

Today there are other complicating factors. In the first place, there are great efforts made to contain costs. It is important to emphasize that these are not just governmental efforts, but also those of major industries and private businesses that pay for health care coverage as a benefit to their employees. Cost-shifting for coverage of the indigent is no longer looked upon as an honorable thing to do as third-party carriers look for ways to decrease costs in a competitive environment. There is also the growth of prepaid programs such as HMOs and IPAs, and related groups such as PPOs. Finally, we have seen the emergence of investor-owned or for-profit systems of care that also emphasize cost-containment as a method for staying competitive and earning income for those investors.

The past 50 years in this country have brought a dramatic shift in our sense of who is responsible for providing indigent care. Responsibility has shifted from private philanthropic organizations, especially churches, to government. Today there is great debate over which level of government is to assume the major responsibility—federal, state, or local. I don't think one needs to be a particularly astute political observer to conclude that the current thinking in Washington is that the primary responsibility for the care of the indigent is to be assumed by the states. The federal government has been willing to give up many of its authorities to the states in order to accomplish this goal. I see no change in that attitude in the near future.

When discussing indigent health care, it is important to define what is meant. Medicaid was designed primarily to improve access to primary and emergency care; that is, care that could be delivered largely out of the hospital and that would permit preventive care, especially to children. Secondary care, including hospitalizations for illnesses that do not require the high cost, high technology efforts generally associated with intensive care units, is also a feature of Medicaid, depending upon the states' decisions. However, tertiary care, including severe trauma and other illnesses requiring advanced technology and a whole array of specialists, had been left largely to state and local governments. Unfortunately, most proposals to solve the indigent care issue do not discuss what aspect of the problem they are proposing to solve. It seems to me that we must have an effective, comprehensive program of primary care in the hopes of avoiding the marked human suffering and increased costs that come from letting health problems progress to the tertiary care stage.

Available options

What are the options? First, there is universal or national health insurance. That is generally put forth as the ideal approach because, in theory, everybody would be guaranteed access to all that medicine has

available without regard to their ability to pay. Unfortunately, in practice it rarely works out that way. I sat for three years on the executive board of the World Health Organization, which has as its goal "health for all by the year 2000." I also sat on the program committee of that board. That committee was charged with reviewing progress reports on the health care system of every member nation annually. What I discovered was that virtually all of what the WHO euphemistically calls "centralized systems" rationed health care by one means or another. In some countries this is accomplished by simply budgeting a fixed amount of money for certain types of care, such as open heart surgery, or by placing age or other criteria as a means of eligibility for such types of care as renal dialysis. All of these steps are taken to control cost, and are not usually based on medical criteria. In any event, I think that the United States is not ready for universal health care for a whole variety of reasons, not the least of which is that our society is not ready to pay the bill.

A second option is federal programs aimed at specific populations. That was the approach taken during the late 1960s and 1980s that led to so much confusion. Although there are still some remnants of that system, I think we are beginning to realize that a comprehensive approach is much more effective and efficient.

The third approach is one that permits each state to determine the needs of its indigent population and to develop a system to meet those needs. This may be done by re-assigning the responsibility and authority to local governmental units, such as counties or hospital districts, or by maintaining the control at the state level as is done in California and Arizona. In Maryland, we have a mixed model with the state maintaining certain responsibilities while others are assigned to the counties. Proponents of this approach to the problem point out that the state maintains the authority for licensure and that that authority can be used to effect indigent care. For example, hospitals may be required as a condition of licensure to provide a certain amount of indigent care, and insurance companies, through the licensure mechanism, may be required to participate in the payment of such care. Opponents of such a plan, however, argue that this is an abuse of the licensure responsibility, and the debate continues.

A fourth option can only be described as miscellaneous. Let me simply give you the example of the State of Maryland. Maryland is a rate-setting state; that is, hospital rates for all services are set by an agency of the state government. Hospitals cannot charge more or less for any service than the rate set by the state. Furthermore, all third-party payors are mandated to pay that rate, thereby, legalizing cost-shifting. Included in the determination of the rate is the cost of providing indigent care and, let me point out, the cost of graduate medical education. However, those factors are only included in the rates for the hospitals that provide them. Hence, in Maryland, the two hospitals with the highest rates are the two university hospitals. Even with this rate-setting mechanism, those two hospitals recover only about 80% of the cost of their care to indigents. In a competitive environment, primary teaching hospitals are at significant cost disadvantage. A second mechanism that has been utilized by Arizona and California has been that of bidding for services. State payments for the care of the indigent are made only to those institutions that receive the bids for providing such care from the state. I am sure there are other mechanisms in use.

I think it is clear that for the foreseeable future, the responsibility for the provision of indigent care will fall upon the states. The states then have the option of deciding how they will carry out that responsibility. Texas has clearly decided that this will be a shared responsibility between the states, counties, and hospital districts by the passage of the Indigent Health Care and Treatment Act by the 69th Texas Legislature. That act and the legislation accompanying it solve one of the significant problems of primary teaching hospitals, namely, the dumping of patients. I think we will see it, or modifications of it, in use in many states in the future. The Report of the Task Force on Indigent Health Care (September 1984) should be widely distributed as a basis for deliberations in other states.

How do we pay?

The fundamental issue is how to pay for indigent care. One can argue that users of any system should pay for the losses encountered by that system. That certainly is the situation with department stores, airlines, and other private industries. All of us share in the cost of bad debts by the rates that we pay for those services. Hence, people have proposed that a tax on hospital admissions or a tax on health insurance be implemented to pay for indigent health care. Several states are examining that option.

A second approach is a general tax. This approach is also being pursued by various states. Two concerns have been expressed about this approach. The first is that when tax revenue goes down, the first approach to decreasing expenditures is cuts in the programs for the poor. Hence, we would be faced with an up and down reimbursement system, leading simply to a form of chaos as we have seen in the past. A second objection is that taxes may be the most addictive agent known for a politician. General taxes intended for a certain level of indigent health care could be expanded to cover a wider and wider range of people, thereby leading to significant tax increases and public dissatisfaction.

Finally, expansion of Medicaid coverage has been suggested.* Several economists have estimated the funding needs for Medicaid to make it a truly comprehensive system to be in the range of $40 to $50 billion. Those same economists have similarly estimated that the tax write-offs for health insurance alone total between $40 and $50 billion. Some are recommending to the federal government that the tax write-off for health insurance as an employment benefit be eliminated, with those increased tax revenues being diverted into Medicaid. On the surface, that is an inviting proposition. However, I do not know enough about the details to be confident about it.

Conclusion

Unfortunately, I have no real solutions to offer you. For the present, we must view indigent health care as a state responsibility. It is, therefore, up to each state to determine how it will meet that responsibility. In my view, Texas has made a major step in that direction. What is important is that the medical profession address this issue. We must put forth reasonable proposals to solve this problem. This is an issue in which we can, and indeed must, take the leadership.

Physicians are experts in health care. Physicians must be heard, both as organizations and as individuals. The strongest voice in this country is that of the individual. That was the most dramatic lesson that I learned in Washington, and I would urge you to take advantage of it with thoughtful, reasonable, and feasible proposals.

REFERENCES

1. Flexner A: Medical education in the United States and Canada. Boston, Merrymount Press, 1910.

*This article was written prior to the passage of the Tax Reform Act of 1986.

Looking for a high return alternative to your present income investment?

Putnam High Income Government Trust... **12.03%*** **Current Distribution Rate**

The Trust is designed to provide high current return, consistent with preservation of capital, from a portfolio of U.S. government securities and may also use options and futures strategies.

The Trust offers you:

- ❑ **Free checkwriting**
- ❑ **Regular monthly distributions**
- ❑ **Active management**
- ❑ **Ready liquidity,** at the then current net asset value which may be more or less than original cost.
- ❑ **Affordability**

Your investment is managed by Putnam's experienced professionals and diversified to reduce risk, but share price and current distribution rate will fluctuate. 4/3/86 and 4/3/87 net asset values were $12.94 and $11.94. Future distributions may vary with market conditions. While the underlying securities are issued or guaranteed by the U.S. government or its agencies, Trust shares are not.

Interest rates and levels of option premiums are presently declining, which may lead to a reduction in future current distribution rates.

*Current distribution rate was computed by annualizing distributions for the previous three months of $0.385 per share ($0.24 from net investment income and $0.145 from net realized short-term capital gains) and dividing by the maximum offering price of $12.80 on 4/15/87. Option writing limits the appreciation potential of portfolio securities. The Trust uses equalization, a commonly accepted accounting principle, which may result in a return of capital for federal income tax purposes.

Just call the investment dealer below or return the coupon.

Choice Investment Products
Larry Horn
5900 Balcones, #210 Austin, TX 78731
512/371-0003
Member S.I.P.C.

❑ **YES!** I want an opportunity for high current return. Send me details TODAY on **Putnam High Income Government Trust,** including a consumer information kit with a prospectus which contains more complete information about the Trust, including charges and expenses. I will read it carefully before I invest or send money.

MY NAME

MY ADDRESS

CITY/STATE/ZIP

MY TELEPHONE NUMBER

JOHN C. MEADOWS, JR, MD
RICHARD L. BAUER, MD, MSc
ANDREW K. DIEHL, MD, MSc

Private physicians as medical educators

John C. Meadows, Jr, MD, Clinical Professor; Richard L. Bauer, MD, MSc, Assistant Professor and Milbank Scholar in Epidemiology; Andrew K. Diehl, MD, MSc; all of the Division of General Medicine, Department of Medicine, The University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284. Send reprint requests to Dr Bauer.

Private physicians who practice in the community often teach in Texas medical schools. The extent of their involvement in teaching ambulatory care was ascertained by a mail survey of departments of family practice, internal medicine, and pediatrics at Texas' seven medical schools. In 1983–1984, approximately one third of Texas medical students were exposed to family practitioners in private practice, and 17% took courses with private pediatricians. Only 5% were exposed to internists in private practice. We describe the format and goals of courses using private practitioners and outline the curriculum of the ambulatory care course in internal medicine at The University of Texas Health Science Center at San Antonio. In our experience, teaching by private physicians is a valuable educational opportunity for both students and physician-teachers.

> The place of medicine is in the stream of life, not on its banks (1).
>
> Learning primary medicine in a university hospital is like trying to learn forestry in a lumberyard (2).

Texas physicians in private practice often contribute to the education of medical students, although the extent of physician participation has not been documented. We recently surveyed departments of family practice, internal medicine, and pediatrics at all US medical schools to determine the involvement of community-based physicians in teaching ambulatory care (3). This report provides detailed results of that survey for the seven Texas schools and presents the curriculum of our ambulatory care course as an example of successful collaboration between private physicians and full-time medical faculty.

Methods

In May 1984, a questionnaire was mailed to departments of internal medicine, family practice, and pediatrics at all seven Texas medical schools. Department chairmen or their designees were questioned about the formats, goals, and enrollments of their courses in ambulatory care and about the extent of teaching performed by private physicians. In addition, information on financial compensation for students and faculty and an assessment of the courses' educational value were requested. One follow-up letter was mailed to nonresponding departments in July 1984. We present data only for ambulatory care courses offered during the third and fourth academic years. For departments reporting more than one course, we calculated means weighted according to the proportion of students enrolled in each course to describe course duration and percent of time spent in course components. The size of the 1983 and 1984 graduating classes at each school was obtained from published reports (4).

Results

Replies were received from 18 of 21 departments polled, for a response rate of 86%. Two departments of internal medicine and one of family practice failed to answer the survey.

Most departments of family practice and pediatrics offered ambulatory care courses that included teaching by community-based private physicians (Fig 1). Although four of five departments of internal medicine offered courses, only one of these involved community-based physicians. Eight of the departments surveyed required these courses for graduation, and three others offered them only as electives. Three departments offered both required and elective courses. Three of six departments of family practice and three of seven departments of pediatrics offered full-time preceptorships (defined as greater than 90% of course time spent with a private physician), but only one internal medicine department offered this type of clerkship. The mean duration of all courses using private physician instructors was 4.1 weeks, with one fourth of total course time spent with the community-based private physicians (Fig 2).

To determine the extent of student exposure to private practice, we calculated the percentage of graduating students who enrolled in each specialty's ambulatory care courses. Only 5% of Texas students graduating in 1984 were exposed to the private practice of internal medicine. One third experience the private practice of family practice, and 17% that of pediatrics. The main reasons given by course directors for using private physician instructors were to demonstrate other career choices and to teach new attitudes in patient care (Fig 3). Course directors almost always (91%) described the educational value of their courses as "exceptional" or "good," with the remainder describing them as "fair." All course directors also stated that students rated these courses as "exceptional" or "good." No department provided financial compensation to private physicians, although three family practice departments gave stipends to students.

Ambulatory medicine at UTHSC-San Antonio

Our fourth-year students are required to take a six-week ambulatory care course in family practice, internal medicine, or pediatrics. All three departments offer experiences with community-based private physicians. In the internal medicine course each student spends one day per week with a community

internist. Approximately 40 physicians in private office and hospital practices and 50 students participate each year. Students observe (and to a limited extent participate in) doctor patient interactions, consultation and referral procedures, record keeping, utilization of office personnel, and office management. No remuneration is given to students or preceptors, but preceptors are offered clinical faculty appointments with promotion based upon their teaching contribution.

Other components of the clerkship include a rotation in the county hospital's walk-in clinic (37% of course time). Patients in this "walk-in" setting have acute problems commonly seen in office practice. Close supervision by fulltime faculty (one or two faculty for up to four students) permits observation of the students' abilities in all aspects of patient management. Students also spend approximately one fourth of their course time in the emergency room, supervised by the resident staff.

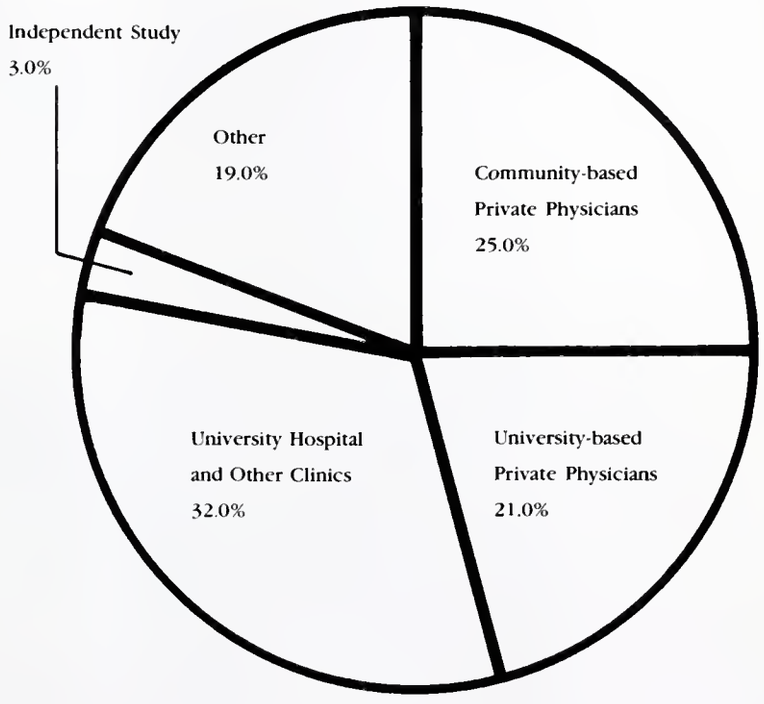
In addition, all students are required to choose a current controversy in ambulatory care, critically review the relevant literature, and present a 10-minute seminar to the other students and faculty. Topics most frequently selected from some 60 suggestions are shown in Fig 4. A series of 20 faculty lectures on ambulatory care topics supplements a syllabus of articles pertinent to problems encountered in ambulatory care (Fig 5).

In internal medicine, six to 12 additional students enroll in full time preceptorships. These six-week clerkships provide students more intensive exposure to private practice than the standard clerkship. Students, chosen from the upper 25% of their class, frequently are allowed greater responsibility for patient care, although all are closely supervised. An attempt is made to choose a preceptor whose practice matches the student's career goals.

1. Characteristics of ambulatory care courses by department type.

	Family Practice (n=6)	Internal Medicine (n=5)	Pediatrics (n=7)
Any ambulatory care course	5	4	6
Ambulatory care course utilizing community-based private physicians	5	1	5
Required course utilizing community-based private physicians	4	1	3
Elective course utilizing private physicians	2	1	3
Full time preceptorship	3	1	3

2. Major components of ambulatory care courses.



3. Reasons for using private physicians in teaching ambulatory care courses in Texas.

	% of Responses
To demonstrate career choices	56
To teach attitudes in patient care	46
To encourage students to enter private practice	18
To improve skills of examination and decision making	18
To increase cognitive knowledge	9

4. Frequent topics for seminar presentation in ambulatory internal medicine.

Should postmenopausal women take estrogen to avoid fractures?
Does jogging prevent heart attacks?
Single dose urinary tract infection treatment—when?
What should be the management of the asymptomatic carotid bruit?
Does strict control of diabetes prevent complications?

5. Topics for lecture series in ambulatory internal medicine.

Pharyngitis	Recurrent chest pain
Urinary tract infection	Management of angina pectoris
Urethritis in the male	Management of obstructive lung disease
Vaginitis	Diabetes mellitus
Headache	Hypertension
Hepatitis	Dizziness and syncope
Back and musculoskeletal pain	Overdoses
Diarrhea	The periodic health examination
Abdominal pain	Ethical issues in medicine
Treatment compliance	How to read medical literature

Discussion

Surveys have revealed a wide disparity between diagnoses made in university clinics and hospitals and those made in the offices of private physicians (5–8). In addition, students taught ambulatory care in university settings may have little knowledge of the realities of community practice. Referral and consultation practices, office procedures and management, finances, and the complexities of insurance remain foreign to most students. Despite this, the majority of Texas medical school graduates enter private practice.

In our experience, use of community physicians in an ambulatory care course has given students insights into medical care not available within the university. Students appreciate the opportunity to see the "real world" of medicine and to participate in longitudinal care rather than acute and usually emergent care of patients. Perhaps of greatest importance for students is the opportunity to meet practicing physicians who can be role models for future careers in private practice.

We believe that teaching done by private physicians benefits the teachers as well as the students. Exposure to students is intellectually stimulating and has prompted physicians to intensify their own learning. Appointment to the university's clinical faculty in recognition of such teaching may also confer prestige. In addition, these physicians are often rewarded by the gratitude of the students.

However, there are also problems. The teaching abilities of the private physician and his enthusiasm are difficult to guarantee. As a result, the course must be frequently evaluated by students and faculty to ensure its quality. Physician-teachers also run the risk of alienating some patients by involving medical students in their practices. Despite these concerns, the benefits of using private physicians as instructors have outweighed any negatives.

Ambulatory care courses that utilize community-based private physicians offer a valuable educational experience by providing students a different perspective on medicine. At present, few students graduating from Texas medical schools have had any exposure to this environment. We believe that departments responsible for teaching primary care should encourage practicing physicians in their community to teach in their ambulatory care courses.

REFERENCES

1. Livingston MC, Bass S, Emery AW, et al: Six medical students in a community hospital. Can Med Assoc J 109(10):1013–1016, 1973.
2. Verby JE, Schaefer MT, Voeks RS: Learning forestry out of the lumberyard. A training alternative for primary care. JAMA 246(6):645–647, 1981.
3. Meadows JC Jr, Bauer RL, Diehl AK: Private physicians in ambulatory care training in US medical schools. J Med Educ 61(6):437–443, 1986.
4. Crowley AE: 84th annual report on medical education in the United States 1983–1984. Appendix II. JAMA 252(12):1590–1597, 1984.
5. Parkerson GR Jr, Baker C: Clinical experience of medical students in North Carolina family medicine preceptorships. J Med Educ 55(1):42–47, 1980.
6. Parkerson GR Jr, Muhlbaier LH, Falcone JC: A comparison of students' clinical experience in family medicine and traditional clerkships. J Med Educ 59(2):124–130, 1984.
7. Barr DM: Primary and specialized care: implications for learning situations. J Med Educ 53(3):176–185, 1978.
8. McCue JD: Training internists: insights from private practice. Am J Med 71(3):475–479, 1981.

ACKNOWLEDGMENT

This article was presented in part at the Third Symposium on Teaching Internal Medicine, Baltimore, Md, December 1985.

Motrin® 800 TABLETS mg

ibuprofen

Extra strength
Convenience
Economy

Upjohn 100 A Century of Caring 1886·1986

©1986 The Upjohn Company

J-6138 January 1986

News from DISTA about a new dosage form of cephalexin

ANNOUNCING NEW

Keflet™ TABLETS

cephalexin

All the advantages of cephalexin in a convenient tablet form

- Backed by over 15 years of clinical experience
- Smaller tablet is specially shaped and coated for easier swallowing
- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:

250-mg Tablets

500-mg Tablets

Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

© 1987, DISTA PRODUCTS COMPANY

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Keflet™ Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms.

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β-hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx, however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S pneumoniae, Haemophilus influenzae,* staphylococci, streptococci, and *Neisseria catarrhalis.*

Skin and skin-structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli, P mirabilis,* and *Klebsiella* sp.

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life threatening.

Treatment with broad spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile.* Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: *General*—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape™ (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers—The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose, the drug reached a maximum level of 4 μg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: *Gastrointestinal*—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity—Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

PV 2211 DPP [111786]

Additional information available to the profession on request from

DISTA **Dista Products Company**
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd by Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

720073

Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the origina hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. S685

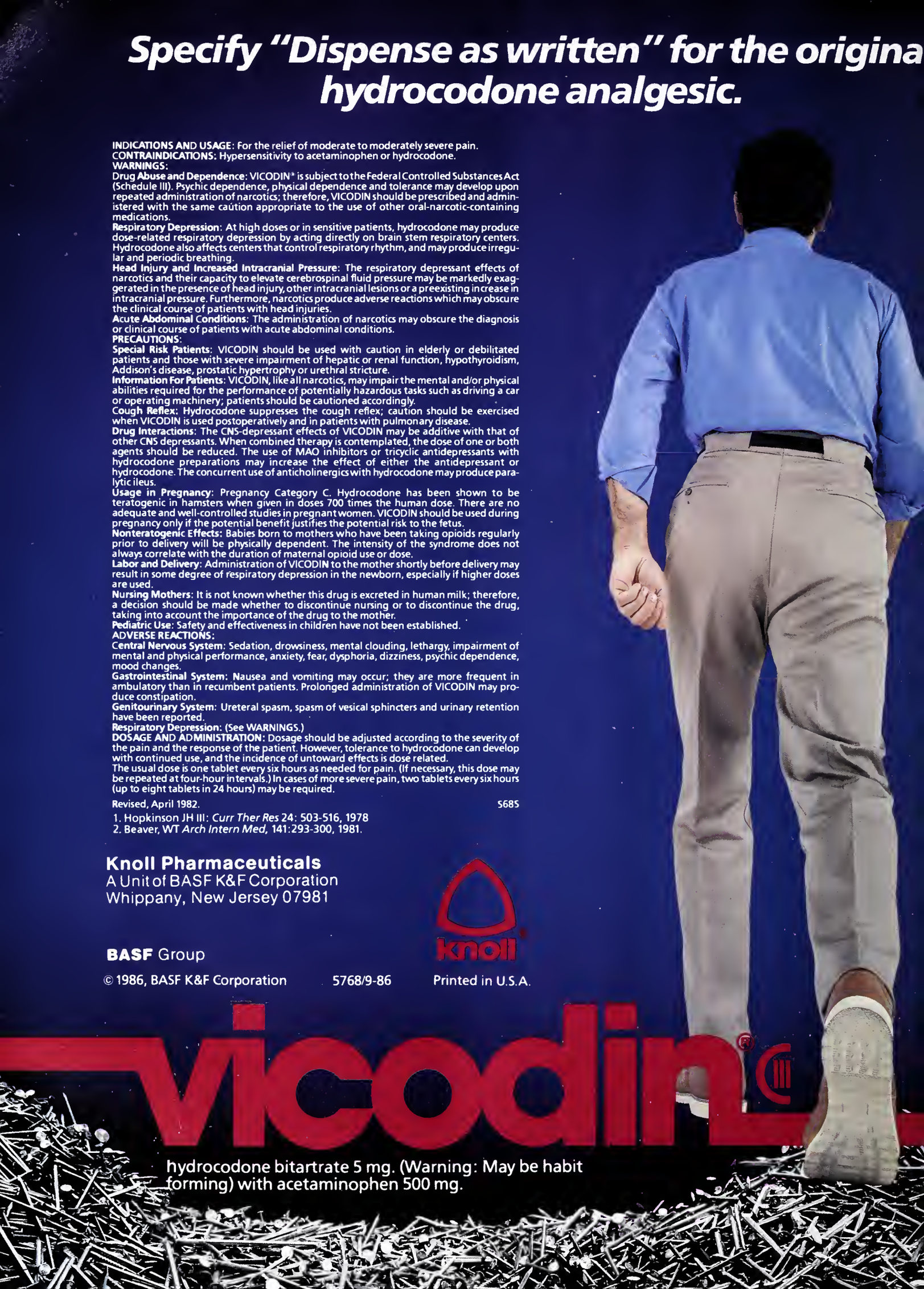
1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med,* 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

knoll®

BASF Group

© 1986, BASF K&F Corporation 5768/9-86 Printed in U.S.A.



RANDALL T. KELLY, MD

BETTY BIBBINS, MD

Pregnancy and brucellosis

A case is presented of a pregnant woman who presented with fever of unknown origin and other constitutional symptoms which, after extensive work-up, led to the diagnosis of brucellosis in pregnancy. Drugs of choice for treatment of brucellosis are contraindicated in pregnancy, so the patient was treated with an alternative therapy consisting of trimethoprim-sulfamethoxazole. She did well on this therapy, but was either not cured or was reinfected during her pregnancy. Brucellosis reappeared at delivery and was then treated with doxycycline. She was well on discharge from the hospital.

Brucellosis is an infectious disease transmitted to man from animals or animal products containing bacteria of the genus *Brucella*. It is characterized by fever, sweats, weakness, malaise, and weight loss. Less than 400 cases are reported per year in the United States (1). The disease is particularly uncommon during pregnancy, although there may be several cases per year that are not reported because the diagnosis is not made. The following case report stimulated review of this rare infection, its treatment in pregnancy, and outcome.

Case report

We examined a 31-year-old Latin American woman (gravida VII, para VI, abortions 0, live children 5) who presented to the emergency room at 22 weeks of gestation with a one-week history of fever, chilly sensations, malaise, photophobia, headaches, generalized myalgias, and a slightly stiff neck. She had had epigastric discomfort after fatty meals for approximately four months. Over the past two weeks, these pains had worsened and at the time of onset of the chilly sensations, the epigastric pain became even more severe. The patient was anorectic for one week prior to admission and had developed left lower quadrant abdominal pain and left lower back pain when the chilly sensations were present. There was no history of any major illness prior to this admission, and the patient denied traveling to Mexico in the past 12 years.

On admission, temperature was 39.3° C (102.7° F), pulse rate 100, respirations 16, and blood pressure 120/70 mm Hg. The patient was alert and reactive, but in mild distress because of pain. Physical examination was normal except that moderate pain was elicited on flexion of the neck, and there was a 0.5 cm palpable and tender right submandibular lymph node. The abdomen had mild right upper quadrant tenderness to palpation with questionable Murphy's sign and Brudzinski's sign. Fundal height was 22 cm. Fetal heart rate was 150 beats per minute. Initial laboratory results showed a hematocrit of 38%, hemoglobin 12.8 g/dL (128 g/L), WBC 6,600 with 45 segmented neutrophils, 34 band neutrophils, 24 lymphocytes, 6 monocytes, and 1 atypical cell. Urinalysis was negative. Serum sodium was 132 (132 mmol/L), potassium 3.5 mEq/L (3.5 mmol/L), BUN 9 mg/dL (3.2 mmol/L of urea), glucose 100 mg/dL (5.6 mmol/L), creatinine 0.9 mg/dL (79.56 μmol/L). Rubella screen was positive, VDRL negative, and cervical gonorrhea culture negative. Serum amylase was normal, but 24-hour urinary amylase was high at 10,043 units. Urine culture was negative. CSF was within normal limits. SGOT, SGPT, and LDH were mildly elevated. Total bilirubin was 0.5 mg/dL (8.55 μmol/L). Creatinine clearance was normal. *Salmonella* culture of the stool specimen was negative. Blood cultures were negative at 24 and 48 hours. Endocervical culture showed 2+ gamma *Streptococcus* and 2+ *Staphylococcus*.

After the patient's admission, she was placed in strict isolation. She continued to have moderate neck pain on flexion and by the second hospital day, a tender, palpable posterior cervical lymph node was thought to be the cause. She then developed bilateral tender palpable (0.5–1 cm) inguinal lymph nodes. This lymphadenopathy and fever were the only continuing symptoms that the patient demonstrated throughout the acute phase of her hospitalization. The patient was treated symptomatically, and no antibiotics were begun pending the determination of a focus or cause of the signs and symptoms.

On the fifth hospital day, cultures from blood taken upon admission and during febrile spikes showed growth of a gram-negative *Coccobacillus* with morphology strongly suggestive of *Brucella*. Therapy was begun with a combination drug, 160 mg trimethoprim and 800 mg sulfamethoxazole, given orally every 6 hours. This drug schedule was maintained for two days, but because the patient continued having febrile spikes, the regimen was changed to intravenous trimethoprim and sulfamethoxazole every 6 hours on a dose/weight basis. Following this change, her fever diminished over the next 24 hours. She continued without fever for five days while receiving intravenous antibiotics and then was switched again to oral medication. *Brucella abortus* antibody titer was 1:1,280. The lymphadenopathy progressively decreased such that there was only minimal enlargement of one, possibly two, non-tender inguinal nodes at the time of discharge on hospital day 15. On discharge, the patient admitted eating some cheese from a door-to-door tortilla salesman who had told her the cheese was home-grown. Discharge medication included trimethoprim sulfamethoxazole DS, one by mouth every 6 hours for eight weeks, and folic acid. She later claimed that she took all this medicine.

At 41½ weeks gestation, the patient returned to

Randall T. Kelly, MD, Assistant Professor and Betty Bibbins, MD, Resident, Department of Obstetrics and Gynecology, The University of Texas Medical Branch, Galveston, TX 77550. Send reprint requests to Dr Kelly, University of Cincinnati, Department of Obstetrics and Gynecology, 231 Bethesda Ave, Mail Location 526, Cincinnati, OH 45267.

the hospital in active labor. She delivered an apparently normal 7 lb 2 oz male with Apgar scores of 8 and 9 by spontaneous vaginal delivery after oxytocin augmentation of labor and the questionable development of chorioamnionitis in late labor. She was then given intravenous penicillin and tobramycin while in labor, but later continued to spike temperatures more than 39° C (102.2° F) after delivery. Blood cultures substantiated the suspicion of recurring brucellosis. Liver enzymes were still mildly elevated. Placenta was term without pathological changes. Placenta culture did not reveal brucellosis. The patient was given doxycycline 100 mg by mouth every 12 hours and defervesced within 24 hours. Initial plans were also to add streptomycin (1 g daily) to the antibiotic coverage for 21 days. However, the patient refused more prolonged hospitalization and left the hospital on postpartum day 7 against medical advice. She was advised to take doxycycline (100 mg twice a day for 21 days). She did not receive streptomycin.

The patient was not seen again until two years later when she delivered a 7 lb 13 oz infant without complications after no prenatal care. There was no evidence for any significant infection during this pregnancy.

The infant, who was delivered from the brucellosis pregnancy, was described as irritable, with upper airway noise, liver edge down 0.5 cm, and with a blind sacral dimple in the admitting nursery. The baby was at the 70th percentile for weight and 20th percentile for head circumference at 38 weeks gestation. Complete blood count showed hematocrit of 51.4%, hemoglobin 17.7 g/dL (177 g/L), white blood cells 18,600, with 43 segmented neutrophils, 4 band neutrophils, 41 lymphocytes, 8 monocytes, 4 erythrocytes, 1 nucleated red blood cell, and 315,000 cu mm (315×10^9) platelets.

Blood cultures were negative. Cord blood IgM was 10 mg/dL (0.1 g/L) (normal 13.7 mg/dL ± 13). The baby had some hyperbilirubinemia of 13.3 mg/dL (227.43 μmol/L) of unknown etiology, which was not treated. The infant was described as normal and stayed in the hospital for six days to await the release of his mother from the hospital. The infant was not brought back to a clinic for developmental examination until after one year of age. The examination described no developmental or neurological problems. However, the infant was treated in the emergency room numerous times in the first 1½ years. He had bacterial conjunctivitis at one month of age, viral upper respiratory infection at two months, viral gastroenteritis at three months, viral syndrome at five months, sinusitis and bilateral otitis media with peribronchial infiltration at 1 year, and viral upper respiratory infection and viral gastroenteritis with ascariasis at 1½ years of age.

Discussion

Brucellosis is a rare disease in the United States in the uncomplicated case, let alone in pregnancy. It is an acute and chronic infectious disease of man caused by a small, gram-negative coccobacillus and is enzootic in domestic animals (2). Approximately 5% of the cattle and 1% to 2% of the swine in the US are infected with one of the brucellae (3). Most of the time, disease in man is caused by eating infected animal products, although breaks in the mucous membrane or skin or the respiratory tract can permit entrance to the lymphatics, blood, and then viscera. Differential diagnosis includes mononucleosis, malaria, typhoid fever, influenza, hepatitis, histoplasmosis, tuberculosis, and lymphomas. The drug of first choice in the treatment of brucellosis is tetracycline with or without added streptomycin or other aminoglycosides (1).

It is known that brucellae can infect the reproductive tracts of animals and human females. They have been a cause of tubo-ovarian and pelvic abscesses, chronic salpingitis, cervicitis, and menstrual disturbances (3). Still a controversial point is whether brucellosis is a cause of spontaneous abortion in humans (4). *Brucella abortus* has been isolated from fetal tissue after birth and from lochia. High agglutinin titers to *B abortus* have been found in a few cases of spontaneous abortion. It thus appears that brucellosis is a cause for some early pregnancy losses, but the number must be very low. The carbohydrate erythritol has been found to be a preferential nutrient for growth of the brucellae species. This material is present in the placentas of pigs, sheep, goats, and cows, but not in the placentas of rats, rabbits, guinea pigs, or man. The lack of this substance in human placentas has been used as an explanation as to why brucellae are not found more often in conjunction with human pregnancy problems (5). As stated above, tetracycline is the preferred form of treatment for brucellosis in the nonpregnant state. However, tetracycline is a known cause of inhibition of bone growth, discoloration of teeth, and possibly micromelia and syndactyly for the fetus exposed in utero. Thus, this drug is contraindicated in pregnancy. Streptomycin, which is also used to treat brucellosis, is also relatively contraindicated in pregnancy because of implicated eighth nerve damage and possible micromelia and multiple skeletal abnormalities in the fetus. An alternative drug or treatment of brucellosis is chloramphenicol, but this medication may be toxic in the neonate and so it is contraindicated in pregnancy (6).

Trimethoprim-sulfamethoxazole is an alternative drug for treating brucellosis (7). It appears to be effective treatment. The increased incidence of hyperbilirubinemia in infants when sulfa drugs are used in late pregnancy is theoretical and not proven

for rapid-acting sulfonamides (6). Since trimethoprim is a folic acid antagonist, there is a question of its safety in pregnancy, but further study will be necessary. The combination of sufamethoxazole and trimethoprim has been shown in animal studies to cause anomalies, especially cleft lip and palate. Both drugs probably should be avoided in early pregnancy.

Brucellosis remains worldwide and widespread in distribution. Human cases are underreported (2). From Texas, the Texas Department of Health reports 237 cases from 1981 to mid-1986 (26 to 47 cases per year). Ninety-eight of the cases were females ranging in age from 2 years to 92 years. Seven of the 98 involved pregnancies.

The most common species isolated is *Brucella melitensis*, followed by *Brucella abortus*, and then by *Brucella suis*. *Brucella melitensis* was isolated from six of the seven pregnant women. Five of these were Hispanics who reported eating goat cheeses or milk. One Anglo was exposed to blood from a *B melitensis* case in the laboratory and one Anglo reported raw milk (cow) consumption (8). There was a large outbreak of brucellosis in Texas in 1983. Some of the cheese was traced to Linares, Mexico, where it was found to be unpasteurized (9). Mexico reports that its incidence of brucellosis was 4,876 cases in 1984 and 4,643 cases in 1985.

REFERENCES

1. Buchanan TM: Brucellosis, in Wyngaarden JB, Smith LH (eds): Cecil Textbook of Medicine, ed 16. Philadelphia, WB Saunders Co, pp 1535–1537.
2. Young EJ: Human brucellosis. Rev Infect Dis 5(5):821–842, 1983.
3. Porreco RP, Haverkamp AD: Brucellosis in pregnancy. Obstet Gynecol 44(4):597–602, 1974.
4. Sarram M, Feiz J, Foruzandeh M, et al: Intrauterine fetal infection with Brucella melitensis as a possible cause of second-trimester abortion. Am J Obstet Gynecol 119(5):657–660, 1974.
5. Lowrie DB, Kennedy JF: Erythritol and threitol in canine placenta: possible implication in canine brucellosis. FEBS Lett 23(1):69–72, 1972.
6. Librizzi RJ: Teratogenic drugs, in Bolognese RJ, Schwarz RH, Schneider J (eds): Perinatal Medicine: Management of the High-Risk Fetus and Neonate, ed 2. Baltimore, Williams and Wilkins, 1982, pp 116–121.
7. Medical Letter, Handbook of Antimicrobial Therapy, in Abramowicz M (ed). New Rochelle, New York, The Medical Letter, Revised ed, 1982, p 28.
8. Reported Morbidity and Mortality in Texas, 1985. To be released Sept 1986.
9. Brucellosis outbreak linked to cheese from Mexico (Healthline). Tex Med 79(12):15–16, 1983.

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

api

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS
MEDICAL
LIABILITY
TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

MARIETTA CROWDER, MD
HAROLD L. HIGGINS, JR, MS
J. JACK FROST

Rubella susceptibility in young women of rural East Texas: 1980 and 1985

A major strategy to hasten the elimination of congenital rubella syndrome is the identification and immunization of susceptible women of childbearing age. This strategy will retain importance until immune cohorts finally dominate this childbearing population (in 10–30 years). We studied the rubella susceptibility screening serologies of 3,364 postpubertal girls and women attending maternity and family planning clinics sponsored by the Texas Department of Health, Public Health Regions 7 and 10. The level of susceptibility of 1,707 women tested in 1980 was 18.9%, and the level of 1,657 tested during a comparable time in 1985 was 8.5%. Those less than 25 years of age were primarily responsible for this dramatic decline. This study indicates that the childbearing population in rural East Texas will be largely comprised of immune cohorts within ten years.

Marietta Crowder, MD, Regional Director; Harold L. Higgins, Jr, MS, Regional Immunization Program Staff; J. Jack Frost, Regional Immunization Program Staff, Public Health Regions 7 and 10, Texas Department of Health, PO Box 2501, Tyler, TX 75710-2501. Send reprint requests to Dr Crowder.

The primary focus of rubella vaccination programs in the United States has always been the universal immunization of children (1). This policy has proven to be highly effective. From 1971 to 1979 rubella morbidity in Texas fell by 95%, and during this same time span the incidence shifted from the 1–4 age group to those ages 15 and over (2). This incidence decline and age group shift were compatible with simultaneous occurrences nationwide (3). The sharp decline in rubella morbidity in Texas was probably the result of the state's imposing a compulsory school immunization law on April 26, 1971, and an intense campaign (1969–1972) to immunize children under 12 years of age. These events also could have been responsible for the shift in morbidity to older age groups (2).

The decline in morbidity was impressive. However, the proportion of susceptibles in the over 15 age group did not decline nationally from the 15%–20% of prevaccine years (4). Therefore, potentially preventable congenital rubella syndrome (CRS) cases would continue to occur during the next 10–30 years. These concerns have led the Centers for Disease Control (CDC) to place increased emphasis on the secondary strategy of identification and immunization of the susceptible childbearing-age population. This increased emphasis could hasten the elimination of CRS (1).

In an attempt to identify and immunize susceptible postpubertal females in this potentially large group remaining at risk, the Texas Department of Health's Public Health Regions 7 and 10 instituted a screening program in 1979. During the early stages of this program, the data for one month (January 1980) were examined. This small study of 337 subjects revealed that the 17.8% susceptible was comparable to the national average. This percentage also corresponded quite well with a similar study of young women in California's smaller rural counties conducted in 1977–1979. This study indicated a 17%-20% level of susceptibility (5). A similar procedure was conducted in early 1985. Of all clients screened from February 11 through February 28 (276), only 8% were found to be susceptible. This dramatic decline was not representative of other recent serological surveys conducted in the United States (6). The objective of this study was to determine if the percent of susceptibile persons identified in the regional screening program had declined significantly when larger samples were considered. The authors also wanted to examine the susceptibility patterns of various age groups.

Subjects

All clients seen in family planning and maternity clinics staffed by regional public health personnel have serological specimens drawn for rubella susceptibility screening during their initial workup.* The subjects for this study were all girls and women seen in these clinics during the first six months of testing for years 1980 (January-June) and 1985 (February-July). The 1980 study group consisted of 1,707 subjects, and the 1985 group included 1,657. Both groups ranged in age from 12 to 44 years.

Public Health Regions 7 and 10 are comprised of 38 eastern Texas counties. The combined population of these two regions is 1,627,381 (7) and is predominantly rural. Only one city in the entire 38-county area has a population in excess of 100,000. Family planning and maternity clinics are conducted by regional personnel in 30 of these counties.

Methods

Data for the 1985 group were recorded from all medical serology forms used for rubella susceptibility screening as they were returned to regional headquarters from the Texas Department of Health's Bureau of Laboratories in Austin. Six months of data had been compiled by August 1985 and appeared sufficient to begin this retrospective study. Our testing months were February-July (no screening was done in January of 1985).

The program's first year of functioning at its peak was 1980, therefore, that was selected as our comparison year. The first six months of testing in 1980 were January-June. The medical serology forms were obtained from the regional laboratory files storage area, and the results were recorded.

*Texas Department of Health: Rubella susceptibility. Public Health Region 7/10 Pharmacy Policies and Procedures Manual, 1984, p 7.

All serologies were performed by the Texas Department of Health's Medical Serology Branch in Austin. Three different tests were used to determine susceptibility of the subjects: hemagglutination inhibition (HI), indirect fluorescent antibody (FIAX), and latex agglutination (Rubascan). The majority of tests performed on the 1980 sample were the indirect fluorescent antibody (FIAX) with some HI tests also performed. The latex agglutination was the only test used on the 1985 group. Unfortunately, the ideal testing situation (the same test, the same technician, at the same time) was not possible in this study. At first there was considerable concern that if the Rubascan was more sensitive than the tests used in 1980, this alone would account for any declines in susceptibility. In fact, using the Rubascan on undiluted serum or a 1:5 dilution has been shown to be more sensitive than the standard HI test (8). However, at a 1:10 serum dilution, the Rubascan compares very well with the HI procedure (9). Fortunately, our laboratory had used the 1:10 dilution. The FIAX technique has been found to produce the same clinical information as the HI.† The following were considered evidence of susceptibility for these various tests:

HI: A titer of less than 1:8 using the standard test procedure recommended by the Centers for Disease Control (10).

FIAX: A titer of 1:8 or less†

Rubascan: No agglutination at a serum dilution of 1:10 (9).

All statistical analysis was performed using the chi-square test for significance.

Age groupings (<15; 15–19, 20–24, 25–29, 30–34, 35+) compatible with those published by CDC (3) were selected. This choice enabled the results of this study to be compared with other serosurveys of postpubescent women.

†Sweet, CE, Chief, Bureau of Laboratories, Texas Department of Health. Letter to the Medical Director, Public Health Region 7, Feb 27, 1979.

Results

Of the 1,707 patients screened during the first six testing months of 1980, 18.9% (324) were determined to be susceptible to rubella. Only 8.5% (142) of the 1,657 subjects tested during a comparable period in 1985 did not have detectable rubella antibody. This decline in susceptibles was highly significant ($p < .0001$). There was a decline in each age group considered; however, the variation from 1980 to 1985 in the three older age groups was not statistically significant. The most significant changes in susceptibility were in the 15–19 and 20–24 age groups ($p < .0001$ for each). The detailed data are displayed in Fig 1. The levels of susceptibility are graphically depicted in Fig 2.

Discussion

This study reinforced our earlier, less extensive study indicating a substantial decline in rubella susceptibility among postpubertal females in East Texas. The patterns of decline within the various age groups afforded some insight into why this change had occurred from 1980 to 1985. Previous studies have concluded that school immunization laws are responsible for dramatically lowering the number of rubella-susceptible school children (5,11). It is probable that these same laws are also primarily responsible for a decline in the number of susceptible young women in rural East Texas. The law enacted in Texas some 13–14 years prior to the rubella serologies on our 1985 study group probably had a direct effect on the levels of immunity of those in the < 15, 15–19, and 20–24 age groups. The three older age groups involved in this study were in no way influenced by school immunization laws, and showed little change in levels of immunity from 1980 to 1985. The law applied to all school children under age 12, which would include almost all individuals in these three younger age groups residing in Texas during the fall of 1971, or moving to the state before their 12th birthday.

Another contributing factor to this decline may be related to a change in regional immunization clinic policy that transpired in 1982. Prior to this year, a physician's prescription was required to ad-

1. Number and percentage of young women susceptible to rubella, Public Health Region 7–10 Rubella Screening Program, 1980 and 1985. (Data represent the first six testing months of each year.)

	1980				1985			
Age	No. Tested	No. Immune	No. Suscept.	% Suscept.	No. Tested	No. Immune	No. Suscept.	% Suscept.
<15	40	26	14	35.0	89	78	11	12.4
15–19	583	471	112	19.2	708	645	63	8.9
20–24	551	432	119	21.6	488	455	33	6.8
25–29	313	267	46	14.7	255	231	24	9.4
30–34	126	103	23	18.3	71	64	7	9.9
35+	94	84	10	10.6	46	42	4	8.7
Total	1,707	1,383	324	18.9	1,657	1,515	142	8.5

minister rubella vaccine to a postpubertal female in a public health clinic (12). On Sept 3, 1982, clinic personnel were directed to immunize all female clients age 12 years and above with rubella vaccine, provided they met the regional criteria regarding consent, health, and pregnancy.‡ An effort was begun at this time to promote rubella immunization of adolescents, even though it was not required by school law. For example, students who came into a public health clinic for a tetanus-diphtheria booster or a measles reimmunization were also immunized with rubella vaccine if they had no documented history of a previous rubella immunization.

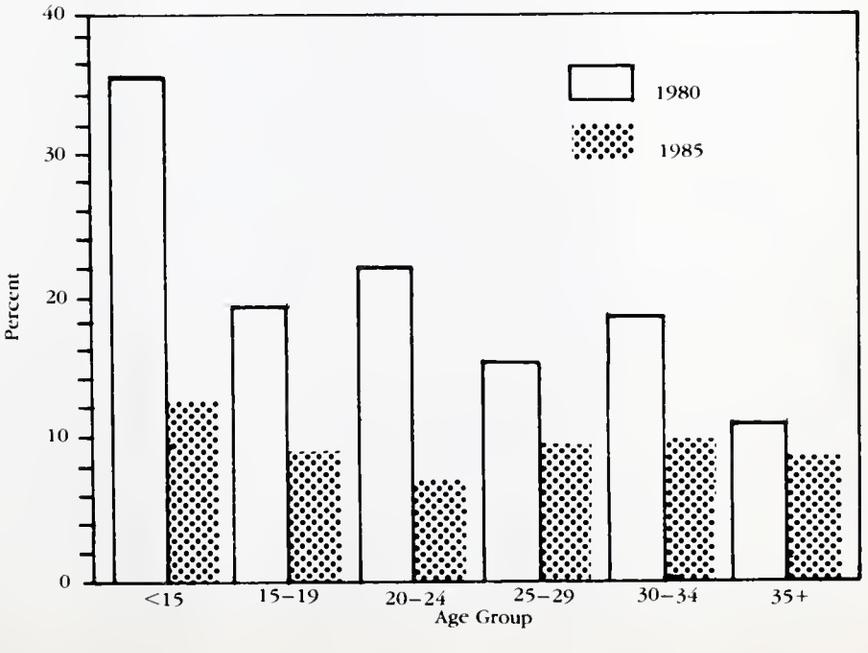
Although this study produced some answers, it also posed several questions. The authors do not have any conclusive answers, but will discuss the following questions: Why did a highly immunized group (< 15, 1985) have 12.4% susceptibles? If there are truly that many susceptible, why is there not increased morbidity? Why are the percentages of susceptibles for the three younger age groups (1985) in reverse order of what was expected considering the probable immunization levels of each group (Fig 2)?

The authors were initially disturbed by the 12.4% susceptibles identified in the < 15 age group in the 1985 sample. This concern hinged upon this age group being subject to Texas' compulsory school attendance and immunization laws, and therefore members of a highly immunized group. Documented histories were not obtainable from our study subjects, and the authors agreed with Preblud and associates that undocumented histories are unreliable (13). However, for two reasons, histories through association warrant considerable merit in this case: (a) The school districts in Regions 7 and 10 reported in 1985 that 99.8% of their 293,982 students were immunized against rubella (14). (b) This reported immunization status was verified by a detailed audit of 11,884 randomly selected records that showed 98.8% immunization protection levels for rubella. The majority of those 145 audit subjects without proof of immunization were provisionally enrolled intrastate transfers whose records had not been received from the previous school attended.

Although this < 15 age group was small, the 87.6% with detectable antibodies (Rubascan 1:10) deviated considerably from the 95% protection levels indicated by the producer of the vaccine (HPV-77 DE5) that the majority of this group probably received (15). Further research, however, revealed that this figure falls within a wide range of seropositivity rates reported by numerous serologic studies of HPV-77 DE5 vaccine (71%–99%) (5). Perhaps the tests used to evaluate this group lacked the sensitivity to identify all those who were actually immune. This possibility is supported by the Immunization Practices Advisory Committee (ACIP) statement that almost all vaccine recipients (12+ months of age at time of immunization) will have detectable antibodies when a test more sensitive than the HI is performed (16). This statement could explain the lack of increased morbidity in this age group.

The seemingly large, though not statistically significant ($X_2 = 2.60$, df = 1, $.1 < p < .2$), difference between the < 15 age group (12.4%) and the 20–24 (6.8%) was thought provoking. The 15–19 group being intermediate with 8.9% susceptibles intensified this interest. One possible explanation would be that the 15–19 and 20–24 age groups would have been increasingly more exposed to natural infection. This would be a plausible explanation for the upward trend in immunity throughout the age groups in the 1980 sample. However, the decreasing levels of immunity from the 20–24 to the > 24 age groups in 1985 do not support this explanation since these older age groups would have had an even greater opportunity to develop natural immunity. Another contributing factor could have been the age at immunization. Prior to 1977 the recommended age was 12 months (17), therefore, members of the < 15 group were more likely to have received the vaccine on or about 12 months of age. A portion of the 15–19 group probably received it at this age, but none of the 20–24 group could have because of their age at the time of vac-

2. Levels of susceptibility to rubella among young women tested in East Texas in 1980 and 1985.



‡ Texas Department of Health: Rubella immunization policy, Public Health Region 7/10 clinics, postpubertal females. Public Health Regions 7/10, director's memorandum to all regional personnel and local health departments, Sept 3, 1982.

cine licensure. It is sheer speculation as to when each of the study groups was immunized, but a recent school immunization record survey of 1,629 East Texas students in this < 15 group revealed that 598 (36.9%) were immunized at < 15 months of age. Some studies have concluded that receiving this vaccine at < 15 months of age results in a significantly higher failure rate (5,18). Ninety-three (5.7%) of the students involved in the previously mentioned records survey had received rubella vaccine prior to 12 months of age, and the evidence of increased ratio of vaccine failures here is much more impressive than in the < 15 month studies (19).

Texas modified its school immunization laws, effective Sept 1, 1981, requiring all students who received a measles immunization prior to 12 months of age to be reimmunized (20). The pool of rubella susceptibles may have been decreased if this law modification had included the same rule for rubella.

This same modification of the school immunization laws required that *all* students show proof of immunity to measles rather than just those less than 12 years of age. Because of growing evidence of the extremely low risk of vaccine-induced adverse effects on the fetus (21), this same change may in the future be applied to rubella. Lowering the pool of susceptible males, a potential source of infection of postpubertal females, would be an added benefit. According to other studies, their levels of susceptibility should be similar to that of females (22). Proponents of rubella immunization of adolescents abound (5,6,11,13,21,23).

The results of this study indicate that immune cohorts are beginning to dominate the childbearing population. It appears that total domination will occur in East Texas at the lower end of the 10–30 year spectrum suggested by Bart and associates (6).

According to the Centers for Disease Control, "Until the susceptibility rate of postpubertal women is effectively lowered, CRS will continue to occur . . ." (23). This study reveals that our susceptibility rate is effectively being lowered, but many susceptible postpubertal females in East Texas still need to be identified and immunized. More serosurveys are needed to determine the actual impact of age at immunization, but if it proves significant, intensive screening efforts will be needed for many years to come. Regions 7 and 10 have begun increased notification efforts and have initiated follow-up serologies after those identified have received the vaccine. It may be overly optimistic to expect to immunize 88% of susceptibles identified, as did Nelson and associates, in Milwaukee (11), but regional personnel hope to achieve much better results than the 60% notified in a Nebraska study and other such programs with equally poor results (24,25).

The overall goal of all rubella vaccination programs is to prevent congenital rubella infection, which results in unnecessary interruptions of pregnancies, stillbirths, and children physically and mentally devastated by the effects of congenital rubella syndrome (23). This admirable goal alone warrants considerable effort from all health professionals involved, but increased efforts are needed to hasten the elimination of rubella and CRS.

REFERENCES

1. Centers for Disease Control: Rubella and congenital rubella syndrome—United States, 1984–1985. MMWR 35(9):129–135, 1986.

2. Texas Department of Health: Age incidence of four childhood diseases in Texas: 1971–1979. Texas Morbidity This Week, Week #35, Aug 30, 1980.

3. Centers for Disease Control: Rubella surveillance January 1976–December 1978. HHS No (CDC) 80–8023, 1980.

4. Cherry JD: The new epidemiology of measles and rubella. Hosp Pract 15:49–57, 1980.

5. Dales LD, Chin J: Public health implications of rubella antibody levels in California. Am J Public Health 72(2):167–172, 1982.

6. Bart KJ, Orenstein WA, Preblud SR, et al: Elimination of rubella and congenital rubella from the United States. Pediatr Infect Dis 4(1):14–21, 1985.

7. Texas Department of Health: Texas population by public health region. Texas Preventable Disease News 45(43), 1985.

8. Storch GA, Myers N: Latex-agglutination test for rubella antibody: validity of positive results assessed by response to immunization and comparison with other tests. J Infect Dis 149(3):459–464, 1984.

9. Wittenburg RA, Roberts MA, Elliott LB, et al: Comparative evaluation of commercial rubella virus antibody tests. J Clin Microbiol 21(2):161–163, 1985.

10. Centers for Disease Control: A procedural guide to the performance of the standardized rubella hemagglutination-inhibition test, unpublished. Atlanta, Ga, USPHS/CDC, 1979. Bruce Elliott, TDH Bureau of Labs, Serology Branch, Austin.

11. Nelson DB, Layde MM, Chatton TB: Rubella susceptibility in inner-city adolescents: the effect of a school immunization law. Am J Public Health 72(7):710–713, 1982.

12. Texas Department of Health: Suggested schedule for routine immunizations in public health clinics in Texas. Bureau of Communicable Disease Services, TDH, Austin (pamphlet No 6–106), June 1972.

13. Preblud SR, Gross F, Halsey NA, et al: Assessment of susceptibility to measles and rubella. JAMA 247(8):1134–1137, 1982.

14. Texas Department of Health: Texas Public School Immunization Report: 1984–1985 School Year. Austin, Tex, Texas Department of Health, 1985.

15. Merck and Co, Inc: Rubella virus vaccine, live. Manufacturer's package insert, April 1971.

16. Centers for Disease Control: Recommendation of the Immunization Practices Advisory Committee (ACIP)—Rubella Prevention. MMWR 30:37–47, 1981.

17. Texas Department of Health: Suggested schedule for routine immunizations in public health clinics in Texas. Bureau of Communicable Disease Services, TDH, Austin

(pamphlet No 6–106), January 1977.
18. Balfour HH Jr: Rubella reimmunization now. Am J Dis Child 133(12):1231–1233, 1979.
19. Herrman KL, Wende RD, Witte JJ: Rubella immunization with HPV-77 DE5 vaccine during infancy. Am J Dis Child 121(6):474–476, 1971.
20. Office of the Texas Secretary of State: Immunization requirements in Texas elementary and secondary schools and institutions of higher education. Texas Register 43(June 9):2058–2060, 1981.
21. Preblud SR, Stetler HC, Frank JA Jr, et al: Fetal risk associated with rubella vaccine. JAMA 246(13):1413–1417, 1981.
22. Blouse LE, Lathrop GD, Dupuy HJ, et al: Rubella screening and vaccination program for US Air Force trainees: an analysis of findings. Am J Public Health 72(3):280–283, 1982.
23. Centers for Disease Control: Rubella and congenital rubella—United States, 1980–1983. MMWR 32(39):505–510, 1983.
24. Paulman PM, Stoesz PA, Mullen J: A survey of rubella susceptible females in Nebraska. Nebr Med J 69(12):407–408, 1984.
25. Falvo CE, Weiss KE, Liss SM: A rubella screening and immunization program in an adolescent clinic. Am J Public Health 69(3):283–285, 1979.

ACKNOWLEDGMENTS
The authors wish to thank the following for their technical assistance in preparing this study: Kay Buchanan, PhD, Texas Department of Health, Bureau of Laboratories, Austin, Texas, Medical Serology Branch; Vicki L. Colston, Texas Department of Health, Public Health Regions 7 and 10, Tyler, Texas, Immunization Program; Jerry W. McLarty, PhD, The University of Texas Health Center at Tyler, Tyler, Texas, Chief, Epidemiology/Biomathematics; Marcia A. Roberts, MPH, Texas Department of Health, Bureau of Laboratories, Austin, Texas, Medical Serology Branch; Barbara A. Sears, PhD, The University of Texas at Tyler, Tyler, Texas, Associate Professor of Health Education; Stephen A. Zinkgraf, PhD, The University of Texas Health Center at Tyler, Tyler, Texas, Research Assistant Professor, Epidemiology/Biomathematics. Our special thanks to all of the Public Health Regions 7 and 10 field nurses and staff, and to the Austin-based laboratory staff, without whose efforts and hard work this study would not have been possible.

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas

Kanaly Trust. Financial Advisors to Physicians and Surgeons.

Kanaly Trust offers financial services to businesses and individuals–with special expertise in the coordination of both areas for closely held and family businesses. Our services are provided on a fee-only basis. No commissions, no conflicts of interest. So you always receive the advice that's in your best interest.

Financial Services to

Businesses
- Financial Counselling-Closely held and family businesses are our specialty.
- Employee Benefit Plans 401k–Pension Plans–Profit Sharing–Thrift Plans–Review–Design–Administration–Investment Management

Individuals
- Financial Counselling
- Personal Financial Seminars
- Investment Advisory Accounts
- Investment Management Accounts
- Personal & Family Trusts
- Estate Planning
- Charitable Trusts & Foundations
- IRA/Keogh

Kanaly Trust Company
Financial advice in your best interest.
4550 Post Oak Place, Houston, Texas 77027, 713/626-9483

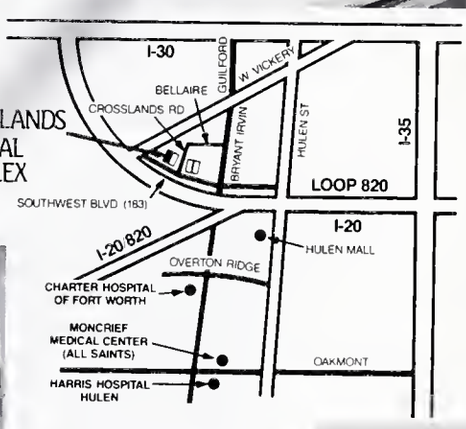
B.Y.O.S.*

CHECK YOUR PERSONNEL WORRIES AND BUSINESS FRUSTRATIONS AT THE DOOR.

This is your invitation to explore a breakthrough officing concept for physicians.

For the physician just beginning practice or for the established physician with many outside demands — large hospital practices, practices in multiple locations, family or other business interests — the administrative and business tasks of a privately owned or leased office are cumbersome and time-consuming.

A professional management group has taken the responsibility of fully furnishing, equipping and staffing Crosslands Medical Complex. Each physician is charged an hourly rate for use of the facility based on a reserved time schedule. He enjoys a private suite and exam rooms and shares the lab, X-ray, nursing and clerical staff with other physicians.



✳ Bring your own stethoscope, but that's all you'll need when officing at Crosslands Medical Complex. It's *practice made perfect.*

Write or call for free brochure with complete details.

6420 Southwest Blvd.
Suite 200
Fort Worth, Texas 76109
817/763-0303

CROSSLANDS MEDICAL COMPLEX

practice made perfect

EUGENE M. HOYT, JD, MD

Access to emergency care—a Texas right

Eugene M. Hoyt, JD, MD, Diagnostic Clinic of Houston, 6448 Fannin, Houston, TX 77030.

Access to medical care is an enforceable right by legislation in Texas. Regulations promulgated by the Texas Department of Health under the Hospital Licensing Law directly affect the standards of physicians' conduct when dealing with emergency care and patient transfers. Most physicians are aware of the Emergency Service Statute, but few are aware of the implications of regulations imposed on medical staffs and physicians individually by the Department of Health regulations.

In recent years concepts of emergency care have changed. New specialties in medicine and nursing provide highly traincd professionals to deal rapidly with life-threatening emergencies. Unfortunately, access to professional emergency services has not always been equally available to all citizens. Likewise, many transfers between hospitals have occurred not just for medical purposes but also for economic reasons.

The Texas Legislature acted, albeit in a somewhat stepwise fashion in 1983 and 1985, to ensurc equal access to emergency services and to insure that transfers between hospitals arc for legitimate medical purposes and not just for the financial convenience of the physician or hospital. The so-called "Texas Emergency Services Statute" (1) was passed in 1983. Its purpose is to ensure the public access to emergency care. The statute requires gcneral hospitals, their employees, officers, and medical staff to provide access to emergency services to those in need of emergency care. To ensure compliancc of health care providers, criminal penalties for violations of the statute are established.

Major emphasis behind this legislative enactment is that services cannot be denied becausc "the person is unable to establish his ability to pay for thc services or because of race, religion, or national ancestry" (2). This statutory pronouncement is in keeping with increasing case authorities.

Ability to pay for services either through insurance or private resources is no longer a criterion for treatment or admission. Patients who have been refused medical services for financial reasons are finding relief not only through statutes but also through the common law. In *Stanturf v Sipes* a patient was denied hospital admission because he was unable to pay the $25 admission charge, but was subsequently permitted to sue for damages resulting from delay in diagnosis (3). Discrimination based on racial grounds has already been established as a violation of the United States Constitution (4).

More specifically the statute provides that, "no officers, employees, or members of the hospital medical staff of a general hospital shall deny emergency services available at the hospital to a person diagnosed by a licensed physician as requiring emergency service . . ." (4,5).

All Texas hospitals that provide "services, facilities, and beds for use by nonrelated individuals requiring diagnoses, treatment, or care for illness, injury . . . and regularly maintaining clinical laboratory services, diagnostic x-ray services" (6) are bound under this statute. Previous emergency services statutes had applied only to publicly funded hospitals and their medical staffs (7). Through this statute, private hospitals now have the same obligation as a public hospital to render emergency care. If a patient is diagnosed as needing emergency care by *any* licensed physician, the receiving hospital is bound by statute to provide available emergency services. ". . . Emergency services means services that are usually and customarily available . . . and that must be provided immediately to sustain a person's life, to prevent serious permanent disfigurement, or loss or impairment of the function of a bodily member or organ" (8). Diagnosis has been madc when the patient presents to the emergency room, "An officer or employee of a general hospital may not deny a patient in need of emergency services access to diagnosis by a licensed physician or the staff of that hospital . . ." (9), recognizing that only a physician can determine if a medical emergency exists. Furthermore, rules promulgated by thc Texas Department of Health under a separate statute, The Hospital Licensing Law, require that ". . . each patient who arrives at the hospital is . . . evaluated by a (staff) physician . . ." (10). The TDH rules raise some interesting legal questions. For example, must a physician be present in the hospital to maintain an "on-call" schedule since each patient who arrives must be seen? Should this schedule be for all physicians; should specialty and subspecialty schedules be established through operation of the rulc?

Many hospitals, even some that claim to provide emergency services, do not have 24-hour "on premises" physicians. Rccognizing limitations on hospital staff members, the Emergency Services Statute provides that an employee of a general hospital that does not have a physician's services available at the time of the emergency is not in violation of this section . . . if after a reasonable *good faith effort*, a physician fails to provide . . . services as required . . . (emphasis added) (11). The words "reasonable good faith effort" are legal words of art. Although nc actions have been commenced under the penalty provision of the Emergency Services Statute, cases decided prior to the effective date of this legislation are helpful in determining the actual meaning to be given the statutory "good faith" requirement. Two recent cases give insight into what the court might require for "good faith effort." Both cases deal with registered nurses.

In *Murphy v Roland* (12) a patient who was eight months pregnant was referred by a nurse midwife to her local hospital. At the local hospital she was examined by two nurses and a telephone consultation was obtained with a physician who had no previous doctor-patient relationship with the pregnant woman. At the doctor's suggestion the patient was then taken by her family to a second hospital. At the second hospital the patient's problems were explained to Nurse Murphy. The nurse was specifically asked to contact the physician on emergency call. Rather than heed the request, the nurse told the family that the patient should be taken immediately to a third hospital that had advanced surgical capabilities. In an action initiated by the Board of Nurse Examiners, the on-call physician supported the nurse's referral to a regional hospital center. The small local hospital had neither sufficient equipment nor staff to provide complex medical services that were needed for this patient. The Court of Appeals, however, concurred in suspension of the nurse's license for "unprofessional conduct." This implies simple referral to another hospital might not constitute a "good faith effort" to obtain appropriate care.

Had the nurse specifically discussed this case with a physician, would the results have been different? In *Lunsford v Texas Board of Nurse Examiners* (13) a parallel fact situation was presented. A critically ill patient presented to a local hospital emergency room. The patient's companion found a physician and requested his assistance. She was instructed to seek help from Nurse Lunsford because the physician was quite busy. The companion again requested help from the physician explaining her companion was suffering with chest pain. The nurse was instructed by the physician to send the patient to a regional medical facility 24 miles away. The patient died en route.

In an action brought by the Texas Board of Nurse Examiners, the nurse had her license suspended for failing to institute appropriate nursing care to stabilize the patient's condition and to prevent complications prior to his transfer by private car. This illustrates that "good faith effort" means more than simply advising an available physician that an emergency exists.

Certainly a physician who is obligated to provide emergency services either by medical staff bylaws or by contract has a duty to render emergency care. The Lunsford case and TDH rules preface a broader finding that all physicians at hospitals have a duty to nonpatient third parties in emergency situations.

This would be in accordance with the "American Medical Association Principles of Medical Ethics," which provides that "a Physician shall in the provision of appropriate patient care, *except in emergencies*, be free to choose whom to serve . . ." (emphasis added) (14).

Criminal penalties may be assessed against hospital officer(s), employee(s), or member(s) of the medical staff of a general hospital if they intentionally or recklessly violate the provisions of the Emergency Services Act (15).

"Intentional conduct" equates with conduct that one knows will bring about a result which will invade the interest of another in a way that the law will not sanction. "Reckless conduct" is something separate from, and less than, intentional or knowing violation of the statute.

Lack of reasonable good faith effort and unprofessional conduct may well equate with criminal reckless conduct as far as juries are concerned. The same conduct undoubtedly could be the basis for civil negligence actions. Reckless conduct is that which disregards a substantial risk that an untoward result will occur, or is a departure from the expected standard of care. Reckless conduct may result in grievous injuries or may result in nothing more than inconvenience to the patient. Criminal penalties attached to reckless conduct reflect the severity of the injury to the patient (16).

On April 1, 1985, Texas became the first state to pass legislation designed to protect patients from inappropriate hospital transfers. The "Hospital Licensing Law" requires the Texas Board of Health to promulgate rules to implement minimal standards to govern the transfer of patients between hospitals (17). As in the Texas Emergency Services Statute, the Texas Department of Health rules state that "the transfer of the patient may not be predicated upon arbitrary, capricious, or unreasonable discrimination based upon race, religion, national origin, age, sex, physical condition, or economic status" (18). Once a patient arrives in an emergency room, the Texas Department of Health rules provide he must be evaluated by a physician who is present in the hospital at the time he presents or must be evaluated by a physician who is "on call" (19).

If a physician is not present in the hospital, the TDH rules require the patient to be seen by the staff "on-call" physician who must be physically able to reach the patient within 15 to 20 minutes after having been informed that the patient is present at the hospital (20). If an "on-call" physician must reach the patient within 15 to 20 minutes, does this mean that the physician who is present in the hospital must see and evaluate a patient within 15 to 20 minutes? Further, the on-call physician must be available by direct telephone or radio communication with hospital personnel (21). Does this mean the "on-call" physician must have a car telephone or radio in order to be " . . . available . . . (to) authorized personnel at the hospital?" Patients must be personally examined and evaluated by the physician before any attempt to transfer them is made (22). The sole exception to this would be a circumstance

in which the physician on call determines that immediate transfer of the patient is medically appropriate and the time required for a personal examination and evaluation would unnecessarily delay the transfer and would be detrimental to the patient. The physician may then verbally order by telephone or radio the patient's transfer (23). Verbal orders for transfer issued by radio or telephone must be reduced to writing, placed in the patient's record, signed by the hospital staff member receiving the order, and countersigned by the physician. Patient transfer orders resulting from verbal orders issued over the telephone or radio are subject to automatic review by the medical staff (24). Quality assurance of the transfer program generally and verbal order transfers are mandated by TDH rules.

Once the decision to transfer has been made, it is incumbent upon the physician to determine and order the appropriate life support measures to stabilize the patient prior to transfer and to sustain the patient during the transfer (25). The physician must also order appropriate personnel and equipment for the transfer (26). Stabilization of the patient prior to transfer is recognized to be a matter of medical practice, and the adequacy of care is to be judged by traditional medical standards. A traditional medical standard of care rule is announced both in the statute and TDH rules: "The transferring physician shall exercise the degree of care which a reasonable and prudent physician exercising ordinary care in the same or similar locality would use for the transfer" (27).

It is within legislative authority to mandate standards of care; however, court interpretation of this section will very likely be based more on a national standard than a limited locality. The TDH rule restates the statutory locality rule but then refers to an article published in the *Annals of Emergency Medicine* (28), and thus tacitly recognizes that this information is easily available to physicians regardless of their locality.

Economic pressures can be applied to financially compromised patients and may unduly influence an individual's request to transfer to another (public) facility.

Local hospital policy shall provide that if a patient is transferred for economic reasons and the patient's choice is predicated by economic factors or is influenced by representations made by the transferring physician or hospital administration regarding the availability of medical care and hospital services at a reduced cost or at no cost to the patient, the physician or hospital administration must fully disclose to the patient the eligibility requirements established by the patient's chosen physician or hospital (29). The obvious point of the rule is to preclude the practice of "dumping" indigent patients from "for profit hospitals" into the public sector and "charity" hospitals.

Under the statute and the rules, individual hospitals are required to establish their own policy concerning the transfer of patients. Hospital policy must provide that the transfer of patients requiring emergency services may be undertaken for *medical reasons* only (30). No economic reasons for patient transfer are permitted under the rules except under special circumstances: an individual requests transfer into the care of a physician in a hospital of his own choosing; contractual obligations exist between a patient in need of services and a designated provider, such as an HMO; or obligations exist under the Indigent Patient Health Care and Treatment Act.

Once the decision to transfer has been made, and prior to the patient's departure from the emergency room, the transferring physician is required to secure *a receiving physician* and a receiving hospital that are appropriate to the medical needs of the patient and that will accept responsibility for the patient's medical treatment and hospital care (31). The rules provide for the transfer of all necessary records for the continuing care of the patient (32). The actual records to be transferred are further elucidated in the TDH rules. Briefly, records are to include a description of the patient's medical history and physical examination, a working diagnosis, records, observations and physical assessment, reasons for the transfer, results of all the diagnostic testing, pertinent x-ray films and reports, and any other pertinent information.

A memorandum of transfer must be completed for every patient who is transferred and must contain essential information identifying the patient (33). The document is to be signed by the transferring physician, or the physician's designee, and transferring hospital administrators, and in a separate section it is to be signed by the receiving physician and hospital administrator (34).

Copies of the memorandum of transfer are to be retained, but not as part of the medical records, at both the transferring hospital and the receiving facility (35).

REFERENCES

1. Tex Rev Civ Stat Ann, art 4438a, sec 1–4 (Vernon Supp 1987).
2. Tex Rev Civ Stat Ann, art 4438a, sec 1(a) (Vernon Supp 1987).
3. Stanturf v Sipes, 447 SW 2d 558 (Mo. 1969).
4. Pennsylvania v San Juan 53 F2d 1181 (10th Circuit, 1975).
5. Tex Rev Civ Stat Ann, art 4338a, sec 1(a) (Vernon Supp 1987).
6. Tex Rev Civ Stat Ann, art 4437f, sec 2(b) (Vernon Supp 1987).
7. Tex Rev Civ Stat Ann, art 4485, (Vernon 1913) for comparison of previous statute and new statute see 1983

Session Laws, at page 2137.

8. Tex Rev Civ Stat Ann, art 4438a, sec 1(c) (Vernon Supp 1984).

9. Tex Rev Civ Stat Ann, art 4438a, sec 1(b).

10. Texas Department of Health Hospital Licensing Standards 11.2.2.1.

11. Tex Rev Civ Stat Ann, art 4438, sec 1(d).

12. Murphy v Roland, 609 SW2d 292 (Tex Civ App-Corpus Christi 1980, writ ref NAC).

13. Lunsford v Board of Nurse Examiners 648 SW2d 391 (Tex App-Austin 1983, no writ).

14. American Medical Association Principles of Medical Ethics. Requiring emergency room service as a condition of staff privilege has been upheld if not otherwise arbitrary, unreasonable or discriminatory. Yeargin v Hamilton Memorial Hospital SW2d 8 (Ga 1972).

Once the designated emergency physician is identified, the duty is clearly inferred from statute and common law. See Hiser v Randolf 617 P2d 774 (Ariz App 1980).

15. Tex Rev Civ Stat Ann, art 4438a, sec 2(a) and sec 2(b) (Vernon Supp 1987).

16. Reckless conduct is a Class B misdemeanor punishable by a fine not to exceed $1,000, confinement in jail for a term not to exceed 180 days, or both such fines and imprisonment. Tex Penal Code, sec 12.22.

If reckless conduct results in permanent injury, disability, or death, the offense is a Class A misdemeanor. Intentional violation of the statute is also a Class A misdemeanor punishable by a fine not to exceed $2,000, and imprisonment. Tex Penal Code, sec 12.21.

If a person intentionally denied medical services dies, it is a third degree felony punishable by confinement for a term of not more than ten years or less than two years, a fine up to $5,000 may also be imposed. Tex Penal Code, sec 12.21.

17. Tex Rev Civ Stat Ann, art 4437f, sec 5(b) (Vernon Supp 1987).

18. Texas Department of Health rule 11–2.1.

19. Texas Department of Health rule 11–2.2 et seq.

20. Texas Department of Health rule 11–2.2.2.1.

21. Texas Department of Health rule 11–2.2.2.

22. Texas Department of Health rule 11–2.2.3.

23. Texas Department of Health rule 11–2.2.4.

24. Texas Department of Health rule 11–2.2.5.

25. Texas Department of Health rule 11–2.6.1.

26. Texas Department of Health rule 11–2.6.2.

27. Tex Rev Civ Stat Ann, art 4437f, sec 5(b)(2), Texas Department of Health rule 11–2.6.3.

28. American College of Emergency Physicians Guidelines for Transfer of Patients. Ann Emerg Med 14(12):1221–1222, 1985, and Texas Department of Health rule 11.1.1.13.

29. Texas Department of Health rule 11–2.1.1.

30. Texas Department of Health rule 11–2.4.1.

31. Texas Department of Health rule 11–2.6.5.

The language, " . . . a receiving physician," strongly implies an identifiable individual who will accept responsibility. This specifically identified receiving physician will acknowledge receipt of the patient on the memorandum of transfer. Texas Department of Health rule 11–2.10.4

Query: The transferring physician may delegate, at least initially, signatory authority under the Texas Department of Health rules, but no such provision is made for the receiving physician. Does this mean an attending physician must meet the patient in the emergency room and cannot delegate "reception" to house officers or other physician colleagues?

32. Texas Department of Health rule 11–2.9.1. et seq.

33. Texas Department of Health rule 11–2.10 et seq.

34. Texas Department of Health rule 11–2.10.4.

35. Texas Department of Health rule 11–2.10.6.

AIM HIGH

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.

We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.
Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 784-3132 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE

SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA · SUBCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

Give your angina patients what they're missing...

CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3]****
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

90 mg GREATER DOSAGE FLEXIBILITY NEW 120 mg

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

CARDIZEM® diltiazem HCl/Marion

FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. ***Issued 7/86***

See complete Professional Use Information before prescribing.

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983, 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesowoy R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris. A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease. When to use which. Mod Med 1982;50(Sept):94-116.*

Another potent benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0246M6

Dx: recurrent herpes labialis

"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms . . .** blisters **never formed . . .** remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L . .** proven **far superior.**" DDS, PA

"All patients claimed **shorter duration . . .** at **prodromal symptoms . . .** HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

A Referral Center for Cardiopulmonary Diseases

Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address: P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

Coagulopathies in cancer

James Gould, MD, and Kenneth Wu, MD, Division of Hematology/Oncology, Department of Internal Medicine, The University of Texas Medical School and The University of Texas System Cancer Center, Texas Medical Center, Houston, TX 77030. Send reprint requests to Dr Gould.

Coagulopathy commonly accompanies malignant illness. Principles of diagnosis and management generally parallel those principles involved in coagulopathies not associated with malignancy. However, the cornerstone of therapy is control of the underlying malignant process. Paradoxically, the same clinical settings which provoke thrombosis may also engender bleeding diathesis. Thus, management is oftentimes difficult and can be facilitated only as answers to fundamental questions are obtained.

The association of malignant disease and recurrent thrombophlebitis was first published by Armand Trousseau in 1865 (1). Since, coagulopathy has become one of the hallmarks of malignant disease. Classic associations include migratory thrombophlebitis as a manifestation of occult adenocarcinoma, disseminated intravascular coagulation (DIC) as a complication of prostatic carcinoma, and DIC as a complication of induction therapy for promyelocytic leukemia. Such associations are not rare: one study implicated coagulopathy as second only to infection as a cause of death in cancer patients, and incriminated coagulation disorders as contributing to death in 43% of patients (2). Imperative to physicians in all specialties of medical practice is a fundamental understanding of cancer-related coagulopathy. Diagnostic techniques and therapeutic modalities parallel those of other coagulopathies; however, the fundamental import revolves around early diagnosis and appropriate referral, when necessary.

Cancer-related coagulopathy is due to an alteration in the delicate balance between promoters of blood clotting ("procoagulants") and inhibitors of the clotting process. Clot formation is promoted by a multitude of factors, and is the subject of many reviews (3,4). The promoters consist of two key elements, platelets and coagulation proteins. Concerted interaction between these elements results in the formation of platelet aggregates entrapped in fibrin mesh. Normally, the clotting process is tightly regulated. There exist at least four defense mechanisms by which clotting is checked. First, there are naturally occurring circulating thrombin inhibitors, ie, antithrombin-III (AT-III) and heparin co-factor II (HC-II). These proteins bind to thrombin, and thereby severely reduce the thrombin activity. Secondly, protein C, when activated and accompanied by protein S, digests coagulation factor V and factor VIII:C, causing a reduction in the rate of fibrin formation. Thirdly, prostacyclin, which is released from vascular wall during vascular damage, inhibits platelet aggregation and dissolves platelet aggregates. Lastly, activation of the fibrinolytic system leads to the dissolution of fibrin. Cancer could create an imbalance in hemostasis by either producing active procoagulants or causing impairment of the defense mechanisms (5). However, much remains to be learned about the exact mechanisms by which cancer causes hemostatic defects. Nevertheless, the clinical manifestations as a result of the hemostatic imbalance are well recognized. This imbalance may lead to bleeding diathesis, thromboembolism, or both. This review offers a general treatise concerning the pathogenesis, diagnosis, and treatment of these important complications in cancer.

Bleeding diatheses

Hemorrhage piques the attention of involved personnel and family, especially in the cancer patient. Frank clinical bleeding is most often preceded by laboratory evidence of coagulopathy, causes of which include thrombocytopenia, DIC, primary fibrinolysis, and coagulation factor deficiency. Successful management is predicated on early recognition and prevention.

Thrombocytopenia is probably the commonest cause of clinical bleeding in cancer patients (2). Because normal marrow possesses a large compensatory capacity to offset platelet destruction, marrow failure must always be ruled out in the evaluation of thrombocytopenia patients. Thrombocytopenia should raise questions about prior chemotherapy or radiation, as each affects the marrow's ability to produce platelets. Likewise, a combination of the two has an additive effect on the marrow. Other causes of marrow failure include tumor infiltration and other myelophthisic syndromes (phthisis: Greek, wasting). Factors that overwhelm the marrow's compensatory capacity include hypersplenism, DIC, and immune mediated platelet destruction.

Also a cause of thrombocytopenia, DIC stands as an entity by itself. Usually manifesting itself as a laboratory phenomenon characterized by abnormal clotting parameters and thrombocytopenia, DIC may also cause fulminant, unresponsive hemorrhage. DIC is a consumptive coagulopathy, that is, clinical bleeding occurs only when clotting substrates are severely depleted by overwhelming intravascular coagulation. Thus, the requirements for developing clinically overt DIC are both an initiating event and an ongoing cause of platelet and procoagulant depletion. Once platelet and procoagulant (notably fibrinogen) consumption have reached a critical level [platelet count $< 50{,}000$ cu mm (20×10^9/L) fibrinogen < 100 mg/dL (1.0 g/L)], severe bleeding problems become imminent (7). DIC may be associated with almost any malignant disease but is most commonly associated with prostatic carcinoma and with induction chemotherapy for acute promyelocytic leukemia (8).

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

JAMES GOULD, MD

KENNETH WU, MD

Clinically similar to DIC, primary fibrinolysis is to be separated from the former. Conceptually, one may think of primary fibrinolysis as analogous to the systemic administration of urokinase, streptokinase, or tissue plasminogen activator. In contrast to secondary fibrinolysis which occurs in DIC and liver disease, primary fibrinolysis is due to accelerated fibrin destruction by substances released from tumor cells. Since intravascular coagulation is not a feature of primary fibrinolysis, consumption of platelet and coagulation factors does not occur. The laboratory abnormalities are characterized by shortened euglobulin lysis time and increased fibrinogen-fibrin degradation products (9). Clotting factors V and VIII are reduced because of digestion of these factors by plasmin.

Multiple coagulation factor deficiencies may also occur as a consequence of malnutrition or hepatic dysfunction. By itself, factor deficiency rarely causes clinical bleeding; instead, it is usually one of several factors that contribute to a generalized bleeding tendency in the terminally ill patient. Schlicter and Harker studied the problem of coagulation parameters in malignancy and noted that despite multiple laboratory abnormalities, the paramount correlates of clinical bleeding are the severity of thrombocytopenia and the rapidity of platelet turnover. Thus, thrombocytopenia holds sway over coagulation factor deficiency in the genesis of clinical hemorrhage (2).

Thromboembolic complications

Although migratory thrombophlebitis is considered a classic presentation of occult adenocarcinomas, statistical associations are difficult to determine with certainty. Rickles and Edwards report an incidence of clinical thromboembolic disease in cancer patients as 1%–11%, with lung cancer patients having the greatest tendency to develop clinical embolic phenomena (6). Clinical manifestations include deep venous thrombosis, migratory thrombophlebitis (with or without pulmonary emboli), and nonbacterial marantic endocarditis. The latter may first manifest itself as a CNS occlusive event, a finding which then leads to evaluation of the heart.

Several mechanisms contribute to the development of hypercoagulable states in malignancy (10,11). Malaise, poor performance status, and surgical procedures each contribute to patient immobility, a well-recognized factor in the development of venous thrombosis. Hyperviscosity states such as those accompanying polycythemia vera, essential thrombocythemia, and Waldenström's macroglobulinemia (IgM serum M-component) predispose to vascular sludging with the subsequent overwhelming of normal thrombolytic mechanisms. Specific features of certain tumors lend themselves to thrombogenic tendencies. For instance, large intra-abdominal masses cause sludging by retarding venous return. Upon cell death and lysis, adenocarcinomas in particular may secrete procoagulants into the circulation, thereby provoking intravascular clotting (12). Of particular importance is the procoagulant contained in granules of promyelocytes released during induction therapy of acute promyelocytic leukemia (ANLL, M_3). This procoagulant most often causes DIC with attendant hemorrhage.

Another mechanism by which tumor cells may cause thromboembolism is by the production of tissue thromboplastin (tissue factor). Tissue thromboplastin is a phospholipid-protein complex, which serves as a cofactor for activated coagulation factor VII to trigger the activation of the coagulation cascade via the extrinsic pathway. Certain tumor cells secrete procoagulants that can directly activate factor X, leading to a rapid formation of fibrin.

Less frequently encountered thromboembolic disorders in cancer include several small vessel (digital ischemia) and microvascular thrombotic syndromes—thrombotic thrombocytopenia purpura (TTP) and hemolytic uremic syndrome (HUS). The mechanisms by which these syndromes occur remain unknown. It is possible that they may be due to platelet aggregating factors elaborated by tumor cells. These factors may then induce diffuse platelet aggregate formation. Aggregate deposition in small vessels causes vaso-occlusion and endothelial cell damage, leading to these distinct syndromes (13).

Diagnosis

Clearly, overt bleeding renders the clinician prone to performing a reflex hemostatic evaluation. However, several historical, physical, and baseline laboratory findings should also prompt evaluation of hemostatic parameters. A history of episodic dyspnea (in the absence of known pulmonary disease) or history compatible with thrombophlebitis should raise the suspicion of hypercoagulable state. Likewise, easy bruising or blood loss from any orifice should prompt baseline evaluation. On physical examination, the presence of purpura, petechiae, or a positive stool guaiac should prompt a test of hemostatic function. Jaundice mandates a test of liver function as well as prothrombin time (PT) and partial thromboplastin time (PTT). Several routine laboratory abnormalities may also indicate hemostatic dysfunction: anemia may indicate blood loss, thrombocytopenia oftentimes indicates marrow dysfunction or ongoing DIC, and prolongation of the baseline PT or PTT may, too, indicate ongoing DIC or primary fibrinolysis.

In the laboratory, five tests compose the basic diagnostic armamentarium: examination of the peripheral smear, bone marrow examination, PT and PTT, and bleeding time (BT). Examination of the peripheral smear is fundamental, for it may show

evidence of reduced platelet numbers, abnormal platelet morphology, abnormal RBC morphology (suggesting DIC or hyperplenism), or the presence of immature blood cells such as nucleated RBCs and leukemia cells. Examinations of bone marrow biopsy and aspirate specimen provide additional information concerning the cellularity, presence of malignant cells, and adequacy of megakaryocytes. These findings are invaluable for evaluating the cause of thrombocytopenia and assessing the condition of the underlying malignant disease. Prothrombin time measures the integrity of extrinsic coagulation cascade, while PTT measures the intrinsic cascade. Bleeding time measures the quantitative and functional adequacy of platelets as well as the integrity of blood vessel. Normal tests virtually exclude significant coagulation, fibrinolytic and/or platelet disorders as being responsible for cancer-related bleeding problems. On the other hand, abnormal values lend support and provide clues to a more efficacious work-up. For working up complicated coagulopathies such as DIC, a battery of tests is almost always required. Tests include fibrinogen, fibrin-fibrinogen degradation products, thrombin time, and platelet count. When the diagnosis is in doubt, more specific indicators of clotting and fibrinolytic activities such as fibrinopeptide A (FPA) and fibrinopeptide Bβ (1–42) and Bβ (15–42) are valuable diagnostic tools. These tests are available in specialized hemostasis laboratories. To evaluate the degree of consumption in DIC, fibrinogen level is generally quite useful. However, measurements of factor V or VIII:C, or both, may at times be useful to differentiate between complicated coagulopathies due to liver disease and DIC.

Malignancy-associated prolongation of PT or PTT implies one of four phenomena: liver dysfunction, malnutrition, DIC, or the presence of a circulating anticoagulant. A useful screening for circulating anticoagulant is to perform a mixing study in which equal volumes of normal and patient plasmas are mixed and PTT (and under special circumstance, PT) is measured. If PTT (or PT) fails to correct, the most likely diagnosis is the presence of a circulating anticoagulant. There exist at least three types of circulating anticoagulants in cancer patients. The most common is the lupus-type anticoagulant, which is usually an IgG or IgM antibody against the phospholipid component of thromboplastin used in the assay of prothrombin time. Presence of this anticoagulant is diagnosed by the thromboplastin dilution test. Rarely encountered are the inhibitors against specific coagulation factors, particularly factor VIII:C. Paraproteins of multiple myeloma and Waldenström's macroglobulinemia may at times interfere with coagulation and platelet function primarily through physical interaction between these sticky proteins and coagulation proteins and/or platelet membrane. Coagulopathy due to metastatic liver disease tends to be mild, characterized by a moderate reduction of coagulation factors synthesized by the liver, ie, fibrinogen, prothrombin, factors V, VII, IX, X, XI, and XII. Factor VIII:C may be elevated. In severe cases, DIC and secondary fibrinolysis may be prominent and may lead to severe bleeding diathesis because of defibrination. Vitamin K deficiency in cancer patients is usually due to poor dietary intake and use of antibiotics. In appropriate clinical settings, a prolonged PT and PTT in the absence of liver dysfunction and fibrinogen reduction should prompt a trial of vitamin K. Improvement in the coagulation parameter should occur as early as 6 hours and no longer than 24 hours following vitamin K administration.

Diagnosis of overt DIC exhibiting prolonged PT, PTT, reduced fibrinogen and platelet count, and increased FDPs is relatively easy. However, diagnosis of "early" or "mild" DIC tends to be difficult unless more specific tests for measuring thrombin activity such as fibrinopeptide A (FPA) or fibrin monomer complexes, or both, are available. FPA is a small peptide released from the Aα chain of the fibrinogen molecule by thrombin. It can be accurately assayed by highly specific and sensitive radioimmunoassay. Fibrin monomer complexes may be estimated by ethanol gelation or protamine sulfate titration test. Both tests suffer from false-positive and false-negative results. More specific tests for fibrin monomer complexes require the use of column chromatography, which is too cumbersome for routine laboratory use. Fibrinolysis is often secondary to DIC and liver disease, but may be "primary" as in prostate malignancy due to release of plasminogen activators by these tumors. Primary fibrinolysis differs from secondary fibrinolysis (DIC) in that platelet consumption does not occur. Moreover, there is no evidence of intravascular coagulation in primary fibrinolysis and hence, FPA and fibrin monomer complexes are normal. A shortened euglobulin lysis time is almost always present, indicating enhanced fibrinolysis.

Thrombotic thrombocytopenia purpura is a syndrome with multiple etiologies. TTP has been reported to be secondary to malignant disease, usually advanced carcinomas. Diagnosis of TTP is established when microangiopathic hemolytic anemia, thrombocytopenia, fever, neuropathy and renal dysfunction are present. Coagulation tests are usually normal. Hemolytic uremic syndrome, closely related to TTP, has been reported in cancer patients receiving chemotherapy, notably mitomycin C, fluorouracil, and cisplatin. The salient features include microangiopathic hemolytic anemia, thrombocytopenia, and renal failure.

Although clinical symptoms and signs provide important clues for the diagnosis of deep vein

thrombosis, venous thrombosis in cancer must be confirmed by contrast venography or noninvasive procedures such as Doppler ultrasound, impedance plethysmography, and radionuclide venography. Pulmonary embolism must be confirmed by ventilation perfusion scans and pulmonary angiography.

Therapeutic strategies

Except for vitamin K deficiency, which can be managed by vitamin K repletion, treatment of complicated coagulopathies of cancer require careful clinical judgment. Mild coagulopathy due to liver disease or DIC does not call for therapy unless the patient is actively bleeding. Coagulopathy due to liver disease is best treated with transfusions of fresh frozen plasma. Heparin is considered to be detrimental. Treatment of decompensated DIC with active bleeding requires a prudent use of low-dose heparin, cryoprecipitate transfusion (supplementing fibrinogen, factors V and VIII:C), fresh frozen plasma, and platelet transfusion. Frequent monitoring of platelet count, fibrinogen, FDP, FPA, PT, and PTT is of value for adjusting the therapeutic regimen. A major effort should be made to treat the underlying disease. Unequivocal primary fibrinolysis should be treated with an antifibrinolytic agent such as epsilon-amino-caproic acid (EACA). An optional modality for treatment of cancer-induced TTP and HUS has not been established. The therapeutic efficacy of plasma exchange, antiplatelet agents, steroid, and splenectomy remains to be established. Treatment of the underlying diseases remains the major therapeutic consideration.

Thrombocytopenia should be managed according to the underlying cause, degree of thrombocytopenia, and presence of bleeding complications. Prophylactic platelet transfusions are indicated in patients with severe thrombocytopenia—platelet count less than 20,000 cu mm (20×10^9/L)—caused by secondary marrow failure or aplastic anemia. Platelet transfusions are indicated in all severe thrombocytopenic conditions except TTP. Although most patients tolerate platelet counts as low as 10,000 cu mm (10×10^9/L), overt clinical bleeding requires transfusions to a platelet count greater than 50,000 cu mm (50×10^9/L). Each unit of platelets will raise the count by about 10,000 (14). In a patient who requires a minor surgical procedure or lumbar puncture, the administration of four units of platelets at the beginning of the procedure is considered adequate coverage. Major surgery should be avoided. In the presence of documented splenic sequestration, splenectomy is successful in about 80% of cases, and, in the presence of adequate marrow megakaryocytes, the peripheral platelet count will rise quickly once the splenic pedicle is clamped (15).

Management of thromboembolic complications is often compromised because of concomitant thrombocytopenia or liver dysfunction. Treatment guidelines parallel those outlined for other hypercoagulable states (10) and generally involve acute anticoagulation with heparin followed by chronic anticoagulation with coumadin. The only curative treatment, of course, is control of the underlying malignancy. Adjuncts in the management of malignancy-associated hypercoagulation include minimizing risk factors for coagulation, generally: avoid protracted immobilization and improve venous return from the lower extremities (foot boards, support stockings). Selection of drug dosage is often arbitrary but may be guided by PTT prolongation. Decisions are frequently made on an individual basis.

REFERENCES

1. Trousseau A: Phlegmasia alba dolens. Clinic Medicale de l'Hotel-Dieu de Paris, London. New Seydenham Society 3:94, 1865.
2. Ambrus JL, Ambrus CM, Mink IB, et al: Causes of death in cancer patients. J Med 6(1):61–71, 1975.
3. Belt RJ, Leite C, Haas CD, et al: Incidence of hemorrhagic complications in patients with cancer. JAMA 239(24):2571–2574, 1978.
4. Williams WJ: Mechanism of coagulation, in Williams WJ, Beutler E, Erslev AJ, et al (eds): Hematology, ed 3. New York, McGraw Hill, 1983, pp 1238–1247.
5. Miller JL: Blood coagulation and fibrinolysis, in Henry JB (ed): Clinical Diagnosis and Management by Laboratory Methods, ed 17. Philadelphia, Saunders, 1984, pp 765–787.
6. Rickles FR, Edwards RL: Activation of blood coagulation in cancer: Trousseau's syndrome revisited. Blood 62(1):14–31, 1983.
7. Wu KK: Disseminated intravascular coagulation, in Wu KK (ed): Pathophysiology and Management of Thromboembolic Disorders. Littleton, Mass, PSG Publishing Co, 1984, pp 247–266.
8. Goodnight SH Jr: Bleeding and intravascular clotting in malignancy: a review. Annals NY Acad Sci 230:271–288, 1974.
9. Aoki N: Fibrinolysis. Semin Thromb Hemost 10(1):1–103, 1984.
10. Shattil SJ: Diagnosis and treatment of recurrent venous thromboembolism. Med Clin North Am 68(3):577–600, 1984.
11. Schafer AI: The hypercoagulable states. Ann Intern Med 102:814–828, 1984.
12. Keis MS, Kwaan HC: Thromboembolism in cancer patients, in Kwaan HC, Bowie EJW (eds): Thrombosis. Philadelphia, WB Saunders Co, 1982.
13. Rossi EC: Thrombotic thrombocytopenic purpura, in Wu KK (ed): Pathophysiology and Management of Thromboembolic Disorders. Littleton, Mass, PSG Publishing Co, 1984.
14. Murphy S: Platelet transfusions, in Spaet T (ed): Prog Hemost Thromb, vol 3, New York, Grune and Stratton, 1976, pp 289–310.
15. Nordoy A, Neset G: Splenectomy in hematologic diseases. Acta Med Scand 183(1):117–126, 1968.

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Clinical overview of alpha interferon. Studies and future directions. Robert J. Spiegel, MD. American Cancer Society, Inc, *Cancer,* vol 59, 1987, pp 626–631.

The clinical development of the alpha interferons has now progressed through initial Phase I and II trials into extensive controlled clinical trial designs. Alpha interferon has been a prototype of other biological agents that are now in clinical development. These agents operate through fundamentally different mechanisms of action than conventional chemotherapy and have produced a unique profile of side effects as well as response patterns. Time to response is generally longer than with chemotherapy, and dose-response and schedule-dependency questions continue to be explored for most tumor types. Although response rates have been low against most solid tumors when alpha interferon is used as a single agent, it has demonstrated a surprisingly wide range of efficacy in hematologic malignancies. These include tumors of presumed B-cell, T-cell, and myeloid lineages. In some diseases, eg, hairy cell leukemia and chronic myelogenous leukemia, alpha interferon is broadly effective; it appears to considerably reduce or occasionally eliminate the malignant clone while normalizing the peripheral blood counts in most patients. In other diseases, alpha interferon appears destined to play a major role as part of combination therapy or in maintenance or consolidation therapy. In other disease settings, alpha interferon's role continues to be explored as part of combination therapy, adjuvant therapy, or as local-regional therapy. The full potential of alpha interferon as an antineoplastic agent will not be determined for many years. In this paper, the results from the first five years of widespread clinical testing are reviewed.

Rates and risks of diethylstilbestrol-related clear-cell adenocarcinoma of the vagina and cervix. Sandar Melnick, DrPH; Philip Cole, MD; Diane Anderson, BA; and Arthur Herbst, MD. Massachusetts Medical Society, *The New England Journal of Medicine,* vol 316, 1987, pp 514–516.

The authors reviewed 519 cases of clear-cell adenocarcinoma of the vagina and cervix identified by the Registry for Research on Hormonal Transplacental Carcinogenesis of the University of Chicago through June 30, 1985. In 60% of all cases the patient's mother had received diethylstilbestrol during pregnancy. An additional 12% of all mothers had been treated with another hormone or with an unidentified medication. Ninety-one percent of the cases in diethylstilbestrol-exposed women were diagnosed when the patient was between the ages of 15 and 27. The median age at diagnosis was 19 years. The risk that clear-cell adenocarcinoma will develop in an exposed female from birth through age 34 is 1 case per 1,000 women. The temporal pattern of occurrence of clear-cell adenocarcinoma corresponds closely with that of the use of diethylstilbestrol for pregnancy support in the United States. The rarity of this tumor among exposed women suggests that diethylstilbestrol is not a complete carcinogen and that some other factor is also involved in the pathogenesis of clear-cell adenocarcinoma of the vagina and cervix.

Histologic classification and staging of multiple myeloma. Reiner Bartl, Bertha Frisch, Ahmed Fateh-Moghadam, et al. American Society of Clinical Pathologists, *American Journal of Clinical Pathology,* vol 87, 1987, pp 342–355.

Bone marrow biopsies of 674 patients with multiple myeloma (MM) were processed for diagnostic evaluation. Histologic variables were correlated with the clinical features to determine factors of value in predicting prognosis. Four of these were used to classify MM into six histologic types: (1) Marschalko type; (2) small cell type; (3) cleaved type; (4) polymorphous type; (5) asynchronous type; and (6) blastic type. These six types were subsequently combined into three prognostic grades: low, intermediate, and high, analogous to the malignant lymphomas. The quantity of plasma cell burden in the biopsy proved to be a useful criterion for histologic staging of MM, supplementing any clinical staging system in use. Both these parameters, grade and stage, provide information required for decision on treatment modalities, while the effects of therapy can be monitored by sequential biopsies.

Managing osteoporosis: current trends, future possibilities. Robert Lindsay, MD, ChB, PhD. Harcourt Brace Jovanovich, *Geriatrics,* vol 42, no 3, March 1987, pp 35–40.

The management of osteoporosis after fracture has occurred is currently difficult. The most effective approach is clearly prevention. Reduction in risk factors, adequate calcium nutrition, and physical activity are all important features, but the mainstay is estrogen therapy. Although this treatment early in the postmenopausal period has been shown to reduce bone and fracture, it must not be forgotten that other biochemical abnormalities in calcium homeostasis may also cause bone loss with aging. Despite the difficulties in treating established disease, newer strategies are being developed in the hope that increments in bone mass may reduce the frequency of fracture recurrence.

President's job takes Dr Brame across Texas and back

"If it's Tuesday, this must be Nacogdoches." That's how Mrs Jim Bob Brame describes the schedule of the 1986–1987 TMA president. Dr Brame, a family physician from Eldorado, has traveled many miles on behalf of the association during his tenure, visiting county medical societies and, most recently, visiting editors of the state's newspapers, explaining the need for tort reform. His duties as president have kept him so busy, he has not practiced since November 1986.

Dr Brame's term began May 10, 1986, in Dallas, and it ends Saturday, May 16, 1987, in Houston during the association's 120th annual session. The fight for tort reform has dominated the schedule, but not at the cost of attention to other issues, including the relationships between private practice and publicly funded institutions and between physicians and peer review organizations. In this interview, Dr Brame recalls the highlights of his term.

Texas Medicine: What was your most important accomplishment?

Dr Brame: The greatest accomplishment was being in a position to work for the Texas Medical Association on major issues. I've had an opportunity to serve the physicians of the Texas Medical Association, and that's been the most important thing to me. That's what it's all been about.

Texas Medicine: Were there any disappointments during the year?

Dr Brame: Yes—not having enough time. Not being able to clone myself and be two people or three people or four people to take care of what I perceive to be the obligations of the office.

And, then, the problems we have had in trying to relate to the Texas Medical Foundation in the peer review process have been very distasteful for a lot of physicians in rural Texas. We've been trying to find out what needs to be done in that arena.

Texas Medicine: Have you learned anything about your colleagues and the profession?

Dr Brame: Absolutely, and that is that we have the most caring group of physicians in the world right here in Texas. Several years ago, I did some other traveling in the state, and there was discontent with patients not paying their bills, not following instructions, and questioning physicians. Physicians seemed to be complaining about things over which they had no control, and they seemed to be averse to the many changes in health care delivery.

And, now these same physicians have done their homework, and they have learned that we have to operate within the system. In doing that, they give a lot more credit to the Texas Medical Association for solving some of the problems that they were trying to solve individually. And, they've gotten back to caring for patients, which is what they've wanted to do all the time.

Our doctors across the state are willing to work within the system. They're seeing what the Texas Medical Association can do in representing them. And, I've been very gratified about that because during my efforts for TMA, I've heard physicians asking, "What has the TMA done for me?" But, now doctors are realizing more and more what organized medicine can do through political actions. TMA has affected every health-related bill considered by our state legislature and Congress. My colleagues appreciate that effort.

Texas Medicine: At the beginning of your term, you said you wanted to work toward creating a for-profit arm of the TMA. What progress has been made?

Dr Brame: The Board of Trustees has already set that up, and it's in its growing stage right now. It will be a very vital vehicle for us in the Texas Medical Association to have more income-producing ventures, more member services that are appropriate for such a large organization.

Texas Medicine: Have any new medical issues surfaced during the year?

Dr Brame: One new issue, obviously, has been the relationship between county medical societies and tax-supported institutions in the state. With competition being what it is, that's probably a schism in some instances. The House of Delegates has addressed this issue, and I hope it eventually will cease to be a major problem, so we can get down to the patient care aspect of medicine.

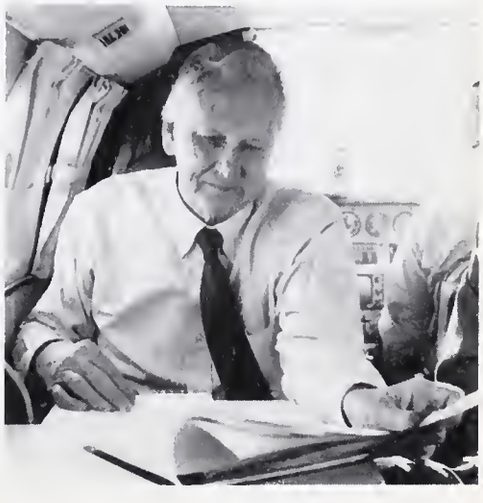
The other issues have to do with the rapid change in how medical care is accessed, based on supply and demand.

Texas Medicine: Has this problem between medical societies and state institutions surfaced in counties other than Galveston (the subject of Resolution 27K, which the House of Delegates approved as amended in November 1986)?

Dr Brame: It's certainly elsewhere. Many of the metropolitan areas are working toward solving the problem. What we are seeing in many areas is a symbiosis between the teaching institution and the physicians, and it seems to be working out pretty well—everybody knows where their turf is. But, there are those instances where there is a lot of discontent, just like there was in 1954 when a similar resolution was presented. I'm not certain that TMA can solve every community's problems, but as a members' organization, it must attempt solutions and help the local physicians.

Texas Medicine: Since you've been on TMA's media tours in support of tort reform, you've talked to newspaper editors throughout the state. What's your sense of how the public perceives physicians?

Dr Brame, TMA's barnstorming diplomat, works in flight.



Are newspaper editors a good indicator of the public mood?

Dr Brame: I think so. I had some apprehension about the tours in the beginning, about an out-of-town physician being looked on as "one of those political doctors." But, I'm finding that when we present the case for tort reform, the editors listen, not only because I'm president of the Texas Medical Association, but also because I'm a practicing physician who has been forced to limit care because of the liability crisis. And, given one-to-one interface for a couple of minutes, they realize that we're talking about patient care, and we're talking about access to care.

Texas Medicine: Does that receptiveness indicate a change in attitude?

Dr Brame: Yes. I think it's a change. People are more informed about the forces that affect the doctor and his or her private practice. They must be further informed that without changes, they simply will not be able to access medical care as they have in the past.

Texas Medicine: What are the chances for significant tort reform during the 70th session of the Texas Legislature?

Dr Brame: I think we have an excellent chance to pass tort reform. The final shape of it—who knows? At this point in time, it's a little tight in the Senate, not so iffy in the House. But, we also need voter approval of the constitutional amendment, and we need to assure the public that tort reforms would not reduce full access to the courts. If we cannot get that amendment, then much of this work will have been for naught, except to create the consciousness that something has to be done to keep our physicians in the full practice of medicine.

Texas Medicine: Will you return to your practice soon?

Dr Brame: Absolutely. Absolutely. I'm looking forward to it.

Texas Medicine: What did you miss about private practice?

Dr Brame: Oh, without a doubt, the patient contact, being away from my patients, being away from my friends in Eldorado, because that's what it's all about. These are the people who taught me really how to be a doctor, and I owe them so much, so much a part of my life that I feel like the rest of my life will be right there in rural West Texas. I have no desire to do anything except practice in Eldorado and work in whatever capacity that the Texas Medical Association wants.

Texas Medicine: Do you have a target date to be back in the office?

Dr Brame: The Monday after the annual meeting in May.

Texas Medicine: What will you miss about the presidency?

Dr Brame: The intensity of the situation. Every day has been a crisis, without a doubt. Things have to be done now. And, I'll miss the relationship with the staff because they have been absolutely magnificent in their support. What other president has worked with *two* executive directors, Linc Williston and Bob Mickey?

If I had a charge for other presidents coming up, it would be to listen very closely to the staff. Even though a president has his or her own agenda and ideas about how things ought to be done, the staff has years of experience behind them. They have the years of legislative experience, political action experience, and they can help a president avoid being blindsided by anything in the field of medical politics.

Texas Medicine: What will you not miss about the presidency?

Dr Brame: At the same time that I will miss certain aspects of the intensity, I will not miss it because the president's schedule is not his own. The president's schedule must be the Texas Medical Association's schedule, as I was taught so well by Cliff Burross. I'll be able to have my own schedule when I get back to Eldorado. But, that's not a complaint because it's been one of the most absolutely enjoyable experiences of my whole life.

And, being the only president to request a $100 contribution for legislative operations is not going to be missed.

Texas Medicine: What do you see as the future of organized medicine?

Dr Brame: I think that as an association, we will have to adapt to changes, just like physicians are adapting to changes in their practice patterns. We need some internal changes in our organization that will better qualify us to move quickly on policy and our fiscal responsibility. The Executive Board should be folded into the Board of Trustees. We must react as any other "special interest group" does because we are a special interest group, except our interests are our patients' interests. That's the direction in which we'll have to go to be even more effective in the future.

Texas Medicine: And, what will your future role be?

Dr Brame: The wonderful part about the TMA is as presidents change, the past president is eager for that new president to get going and to dedicate a year of his life and his services to TMA. David Vanderpool is going to be an exceptionally capable and effective president, and I'll be available in any capacity in which David wants to use me. There will be a great deal of carry-over to insure passage of the constitutional amendment.

Texas Medicine: Do you have a message for the membership?

Dr Brame: The message is to thank each of them. They have been so kind to me during my tenure. I guess if I am going to miss something, it's those personal relationships that I've had with doctors—spending nights in their homes, meeting their families, eating with them, finding out what their real problems are, and finding out that their problems really are not any different in Texarkana than they are in El Paso. They're the same problems related to taking care of patients with the knowledge and the skills and the technology that are available. The message is just a very, very sincere thank you. As I said, it's been one of the greatest experiences of my life.

Changing times—an update of TSBME rules

In recent months, the Texas State Board of Medical Examiners has adopted a number of changes and additions to its rules in accordance with its statutory duty to regulate the practice of medicine in Texas. Some changes respond to concerns of members of the legislature, while others clarify sections of the Medical Practice Act or existing rules. This article summarizes these major changes.

Administrative sanctions

All physicians who practice medicine in Texas, as the Medical Practice Act, section 1.03(8), (1) defines that term, must be licensed by the Texas State Board of Medical Examiners. A licensee is subject to discipline for a violation of the Medical Practice Act or any of the rules and regulations [section 3.08(5)] (1) that the board may adopt pursuant to its rulemaking authority [section 2.09(a)] (1).

While some minor infractions may be handled without any investigation, most complaints within the board's jurisdiction are referred to field investigators. If the evidence indicates a violation of the Medical Practice Act, the board's executive director and enforcement staff review the case to decide what disciplinary action will be pursued. Hearings for more serious complaints are conducted by either a hearings officer, a panel of five or more board members, or the full 15-member board. When a hearings officer or a panel of the board hears a case, a report containing findings of fact and conclusions of law is made to the board. The full board then makes the final administrative decision (2). These hearings are governed by the Administrative Procedure and Texas Register Act (3).

Complaints of a less serious nature are handled by an administrative sanction. In these informal proceedings, the physician meets with the staff of the board's hearings division, a physician who is either a member of the board or a member of one of the board's district review committees, and the investigator assigned to the case. Prior to Dec 11, 1986, records regarding administrative sanctions were kept confidential. Responding to some legislators' concern that such records need to be public so patients may select physicians on a more informed basis, the board adopted rules that made public virtually every administrative sanction after Dec 11, 1986 (4). The new rules require the board to send the complainant a notice of the hearing and a copy of the board rules concerning administrative sanctions via certified mail, return receipt requested. The board gives the complainant the opportunity to appear and testify or submit a written statement for consideration at the hearing.

The newly amended rules allow the complainant to appear with a representative and to be present during the hearing itself. However, no rights to cross examine or introduce evidence, other than those previously mentioned, are allowed. The investigative file remains confidential, and only board members or staff may review the file. The hearing is closed to all persons except witnesses giving testimony, the licensee and his or her attorney, the complainant and his or her representative, board members, district review members, and board employees.

Shortly after the close of the informal hearing, the board presents the physician with a recommendation for resolution or correction. The recommendation generally is written in an affidavit format. The physician may accept or reject the proposed resolution. If the physician rejects the proposed resolution, then the case is referred to the board's secretary or chief executive officer for appropriate action. If the physician accepts the proposed resolution, then the affidavit is forwarded to the secretary or chief executive officer for approval. Final approval rests with the full board.

The new rules specifically state that the results of any sanction and any letter, agreement, or affidavit shall be an open record. Access to these documents is governed by the Open Records Act (5). Within ten days of receipt of a written request for records, the board must provide access to or copies of the records. The board may within the ten-day period request an Attorney General's opinion as to the open records status of the requested records.

Authority of physicians to supply drugs

The Texas Medical Association has taken the position that physicians lawfully may supply their patients with drugs and remedies to meet their patients' immediate needs and may recoup their costs by charging patients accordingly, so long as they do not charge a fee for dispensing the drugs (6). This position conflicts with the Texas attorney general's opinions interpreting the Medical Practice Act (7). In accordance with these opinions, the State Board of Medical Examiners has promulgated rules on the authority of physicians to supply drugs (8). These rules became effective Jan 2, 1987.

The rules address situations in which (1) physicians may supply drugs and be reimbursed for the cost of the drugs, (2) physicians may supply drugs but may not be reimbursed for them, and (3) physicians may authorize the administration or provision of drugs to patients in facilities licensed by the Texas State Board of Pharmacy.

In the first instance, a physician who qualifies as a rural physician may supply dangerous drugs in his or her office in the course of treating patients and may be reimbursed for the cost of those drugs without obtaining a license under the Texas Pharmacy Act (9). This authority to supply drugs will, in all likelihood, apply to very few physicians. To qualify, a physician must practice in a "rural area." A rural area is defined as "an area in which there is no pharmacy within a 15-mile radius of the physician's office and which is within either a county with a total population of 5,000 or less according to the most recent federal census; or a city or town, incorporated or unincorporated, with a population of less than 2,500 according to the most recent federal census, but not including a city or town, incorporated or unincorporated, whose boundaries are adjacent to an incorporated city or town with an equal or greater population."

In the second situation, a physician may administer a drug and charge a separate fee for the administration of the drug. The administration of a drug means the direct application of

the drug by injection, inhalation, ingestion, or any other means to the patient's body. The administration of the drug must occur in the physician's office. The separate fee allows the physician to recover the cost of administration, which includes the cost of the drug that was administered.

The board rules allow a physician to dispense or distribute a drug to his or her own patients so long as it is for the patient's immediate needs and a separate charge or fee is not made.

Finally, a physician may authorize the administration or provision of drugs to a patient in a facility licensed by the State Board of Pharmacy.

Except in the licensed facility (where a physician may only delegate the act of entering the patient's name, address, and date), a physician may delegate to any qualified and properly trained person, acting under the physician's supervision, the appropriate labeling of medications applicable to the class of drugs under the Texas Pharmacy Act and the packaging and record-keeping sections applicable to the class of drugs.

The quantity of drugs covered by these rules is limited. The rules permit only that quantity of drugs that meets the patient's "immediate needs." The rule defines immediate needs as "the amount of a prescription drug needed for the proper treatment of a patient until access to a pharmacy is possible."

In brief, a rural physician may be reimbursed for the cost of drugs, a physician may be reimbursed for administering a drug, and a physician may give a drug away, so long as all appropriate labeling and record-keeping requirements are met.

Physician assistants rules

On July 8, 1986, the amended board rules concerning physician assistants (PAs) became effective (10). The amended rules widened the ability of a physician to use a PA. Additionally, the rules eased some of the more onerous requirements placed on PAs. However, it should be emphasized that the rules do not relieve the supervising physician of professional and legal responsibility for the care and treatment of his or her patients.

The physician now may utilize two PAs, whereas before, only one full-time equivalent PA per physician was permissible. In the rules, it is now clear that a PA may, at the discretion of the supervising physician, serve as an assistant in surgery. However, such assistance must not be in conflict with hospital bylaws or rules.

The language governing the supervision of PAs was changed to reflect that the adequacy of the physician's supervision of the PA's performance shall be reckoned by standards that take into account the skill, training, and experience of both the supervising physician and the PA. The standard no longer requires the physician's "active and continuous" overview of a PA, but it does require that the physician make a personal review of historical and physical data on all patients and their problems.

The rules also have changed in the area of establishing a diagnosis and formulating a therapeutic plan. The old rules stated, "The PA will not supplant the physician in the integration of medical data or in the decision-making process required to establish a diagnosis and formulate a therapeutic plan." The new language adds two words, "independently" and "final." The rule now reads, "The PA will not independently supplant the physician in the integration of medical data or in the decision-making process required to establish a final diagnosis and formulate a therapeutic plan." The changes appear to take into account the PA's ability to use his or her knowledge, training, and experience to interact with the physician to help establish a diagnosis and to formulate a therapeutic plan. The rules seem to indicate that a PA may propose preliminary diagnoses and plans for the physician's consideration.

Some procedural constraints on PAs were eased by the rules changes. Prior to the changes, a patient was required to sign a specific form concerning the uses and limits of PAs before the PA could have patient contact. Signs concerning PAs had to be plainly posted, and the PA was required to wear a name tag that had printing not less than 3/8 inches in height. The new rules require only that the patient be informed that the PA is not a physician, and that the patient may insist on seeing the supervising physician at any time. The PA may render services once the patient has consented and supporting documentation has been entered on the chart. Instead of signs, educational information concerning the PA is to be easily available to all patients. Finally, the name tag size requirement was dropped.

Retired physicians

On Sept 18, 1986, the board rule on the retired physician exception to the annual registration fee became effective (11). The rule allows the board to place a physician on "official retired status." Prior to this rule, a physician who wanted to retire from the active practice of medicine and cease paying the annual registration fee had to purposely refuse to pay the annual registration fee. After the requisite period of time, the physician's license was cancelled for nonpayment. With this new rule, the board allows a physician to retire with dignity.

The rule requires certain prerequisites before a physician may become exempt from the annual registration fee because of retirement. The physician's current license must be active and in good standing. The physician must request in writing on an appropriate form that the license be placed on official retired status.

There are restrictions on physicians' licenses once they are on official retired status. The physician must: (1) continue to submit an annual registration form, (2) not engage in clinical activities or practice medicine in any state, (3) not prescribe or administer drugs to anyone, (4) not possess a Drug Enforcement Agency or Texas controlled substance registration, and (5) not have his or her license endorsed to any other state.

To return to active status, the physician must first obtain the board's approval. The returning physician must pay all previous exempt annual registration fees. Finally, if the physician has been retired for five years or longer, then he or she must pass component II of the FLEX examination before being returned to active status.

Special standing orders for optometrists

On Feb 27, 1987, the board adopted rules whereby a physician may issue a standing delegation order to an optometrist to use topical ocular pharmaceutical agents for nontherapeutic purposes in the practice of optometry (12). The rules were to become effective April 6, 1987.

This law is under a special section of the Medical Practice Act, section 3.06(d)(5)(1). Previously, former Attorney General Mark White declared this section of the act unconstitutional. On resubmission, Attorney General Jim Mattox declared the section constitutional (13). However, the opinion also held that the Texas State Board of Medical Examiners could regulate only the form and not the substance of this standing delegation order. The rules recently adopted by the board contain board-approved forms.

If a physician issues an order in compliance with this section of the Medical Practice Act, then he or she has immunity from liability in connection with acts performed pursuant to the standing delegation order. The immunity lasts so long as the physician has used prudent judgment in the issuance or continuance of the standing delegation order.

There are three requirements for a physician to issue a standing delegation order for the administration of topical ocular pharmaceutical agents by an optometrist. First, the requesting optometrist must make a formal written request to the physician for a standing delegation order. Second, the physician must have knowledge of the optometrist. "Knowledge" requires that the physician has been "aware of and has taken into consideration the optometrist's education, training, standing with the Texas Optometry Board, and the optometrist's general practice" (12). Finally, the physician must be one who practices in the same geographical area as the optometrist. This proximity would enable the physician to render medical services, if necessary.

Contrariwise, there are three reasons whereby a physician may deny issuance of a standing delegation order. If the physician does not have knowledge of the optometrist, or determines that denial is within the scope of sound medical judgment as it pertains to optometry, or determines that it is not in the public interest, then the physician may deny a request for a standing delegation order. If a physician denies a standing delegation order, the optometrist may request, in writing, the basis for the denial. The physician is to respond, in writing, giving the basis for the denial.

Once the agreement for the standing order is reached and reduced to writing, a copy must be sent to the Texas State Board of Medical Examiners.

The optometrist must comply with four requirements if he or she is to continue the standing delegation order in full force and effect. The optometrist must maintain his or her optometry license in good standing with the Texas Optometry Board. Any disciplinary action or litigation or threatened litigation involving professional negligence must be reported to the authorizing physician immediately. Next, the optometrist must maintain adequate patient records. The delegatee must certify to the board upon initial delegation that he or she is familiar with the Texas Medical Practice Act, section 3.06(d)(5)(1). Finally, the optometrist must permanently display the standing delegation order in his or her office.

In like kind, the authorizing physician must comply with three requirements for continuing the order. The physician must establish a method for initial and continuing evaluation of the professional competency of the optometrist. The physician also must review annually the standing order and appropriate patient charts. The last requirement is to certify to the TSBME that the optometrist is familiar with the Medical Practice Act, section 3.06(d)(5)(1).

The standing delegation order may be terminated in a number of different ways. The board of medical examiners may cancel the order if it determines that the optometrist possessing the standing delegation order has violated either the standing delegation order or the Texas Medical Practice Act, section 3.06(d)(5)(1). Either the optometrist or the physician may cancel the standing delegation order at any time for good cause. It also may be cancelled or terminated by agreement of the physician and the optometrist. In any event, the board must receive copies of the instruments terminating or cancelling the standing delegation order.

Conclusion

These changes reflect a sincere effort by the Texas State Board of Medical Examiners to fullfill its mandate to implement the Medical Practice Act and to regulate the practice of medicine in Texas. The board is conducting its affairs in a more open and public forum and giving better guidance and direction to the physician's daily practice. On a more personal level, a new mechanism allows a physician to retire without having to endure the loss of his or her medical license. The board's proactive changes should enhance the environment for the practice of medicine in Texas.

C. J. FRANCISCO, JD
TMA Staff Attorney

REFERENCES

1. Tex Rev Civ Stat Ann art 4495b (Vernon Supp 1987).
2. Young MG: Competence and quality assurance in medicine. Tex Med 82(8):62–68, 1986.
3. Tex Rev Civ Stat Ann art 6252–13a (Vernon Supp 1987).
4. Tex State Bd of Med Ex, 11 Tex Reg 3918 (1986), adopted, 11 Tex Reg 4852 (1986) (amending 22 Tex Admin Code sections 195.1–195.4) (administrative sanction procedure).
5. Tex Rev Civ Stat Ann art 6252–17a (Vernon Supp 1987).
6. Young MG: Management of medications. Tex Med 80(1):62–64, 1984.
7. Op Tex Att'y Gen Nos JM 304 (1985), MW 410 (1981).
8. Tex State Bd of Med Ex, 11 Tex Reg 3897 (1986), adopted, 11 Tex Reg 5057 (1986) (codified at 22 Tex Admin Code sections 169.1–169.6).
9. Tex Rev Civ Stat Ann art 4542a-1 (Vernon Supp 1987).
10. Tex State Bd of Med Ex, 11 Tex Reg 1340 (1986) adopted, 11 Tex Reg 2980 (1986) (amending 22 Tex Admin Code sections 185.1, 185.2, 185.4, 185.6–185.12) (physician assistant).
11. Tex State Bd of Med Ex, 11 Tex Reg 2941 (1986) adopted, 11 Tex Reg 3862 (1986) (codified at 22 Tex Admin Code sections 166.1–166.3).
12. Tex State Bd of Med Ex, 12 Tex Reg 174 (1987) adopted Feb 27, 1987 (codified at 22 Tex Admin Code section 193.6).
13. Op Tex Att'y Gen Nos JM 454 (1986), MW 499 (1982).

Daily two-minute meeting keeps doctor in charge

Starting the day right may be the most difficult problem facing today's physician. Even if he gets up and out of the house on time, he still has to get through hospital rounds and, assuming no surgery, get to the office on time.

The obstacles faced are no less than those of a halfback trying to pierce the Houston Oilers' defensive line: parking, hospital elevators, nursing personnel, missing medical data, colleague interruptions, hospital administrators—and—the hospital coffee shop.

The coffee shop is the salon of the practicing physician. Here he finds out *what's happening*. Some have been seduced into the "coffee shop syndrome," lolling around with other members (and seducers) of the medical fraternity. Beware the coffee shop syndrome! Used too frequently, the coffee shop may be injurious to the health of your office practice!

Now, if you multiply those problems by the number of hospitals you attend, you've got a real problem.

General solution: Don't involve yourself in more than two hospitals, if possible.

Assuming you are delayed at the hospital for whatever reason, you owe it to yourself, your office staff, and your patients to call in and let them know of your delays. Alert office personnel will be able to do some fast rescheduling so your office load will be easier to handle. If not, you will arrive too late. You will have a reception room overloaded with anxious and angry patients, your staff will be tense, and you will be unhappy.

The two-minute meeting

Whether you're late or on time, a great way to start your office day right is the two-minute meeting. Most doctors go to their offices, take off their coats, put on a uniform, and are told where to start working: "Doctor, patient X is in examining room 1." At the end of two, three, or four hours the doctor is told there are no more patients.

He is actually being supervised by the employees!

If the physician arrives at the office late, there is an air of urgency. He knows only that he is going to have to work fast, hard and furious—and so are his aides.

Most important is the need for the physician to establish daily control of his or her practice and staff. I recommend the two-minute meeting:

1. *What is the two-minute meeting?* It's a stand-up meeting between the physician, the back office nurse and, if possible, the receptionist.

2. *What's its purpose?* Look at today's appointment schedule, determine if you can handle today's load, and make changes in patient flow *so that you can effectively manage today's activity*. Put out fires . . . don't sit in them.

3. *How does it work?* When you arrive at the practice, you meet in your office on a stand-up basis; you look at today's appointment schedule, and the first thing you have to decide is, "Can we see the patients we are scheduled to see?" If not (because you are late in getting started or because you are overbooked), instruct the staff to try to rearrange the schedule. One of them will call some patients and try to reschedule them so as to decrease today's load. You are solving today's work load problem.

4. *What else can you do?* You may be able to cluster certain patients whom you can see more quickly (routines, post-ops, simple chronics). You could depopulate the jammed reception room by seeing patients who are there with family or friends. Call off your luncheon appointment. You may determine you need an extra hour of work at the office. If so, decide early, not later on.

5. *What should you not do?* Don't work fast; don't work harder. Pacing on a daily basis is more important to you, your aides, and your patients than seeing a few more patients on a given day. When you go fast, you forget things. The natural consequence is that the patient stops you, or stops your nurse, or calls the next day, and you actually lose time instead of saving it.

Summary

The two-minute stand-up meeting is a daily time control tool which allows you to re-examine today's patient schedule and try to relate it to the hours left in the day.

Also, your aides want you to make daily planning decisions, and you can do this with the two-minute meeting.

Start your day right by: (1) limiting the number of hospitals you serve, (2) avoiding hospital "habit traps," (3) communicating delays to your office, and (4) practicing the two-minute meeting at your office every day.

GEORGE S. CONOMIKES
President, Conomikes Associates, Inc, 4270 Promenade Way, Marina del Rey, CA 90292.

This article has appeared in the *LACMA Physician*, journal of the Los Angeles County Medical Society, and is reprinted with permission.

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH

INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Robert S. McFadden, MD
Daniel E. Whitman, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
Eugene M. Hoyt, MD
James V. Ryan, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

J.G. Brannon, Sr

Jack G. Brannon, Sr, MD, 73, an honorary member of Texas Medical Association, died Jan 1, 1987. Dr Brannon had lived in Houston since 1937.

He was born in Bastrop, Tex, and attended The University of Texas at Austin. In 1936 he graduated from Baylor College of Medicine in Dallas. He moved to Houston in 1937 for an internship at Hermann Hospital. During his years of practice in Houston, Dr Brannon served as clinical instructor of surgery for Baylor College of Medicine and The University of Texas Health Science Center.

Surviving family members include his wife, Betty Ann Brannon, Houston; daughter, Gay Hatfield, Winnsboro, La; son, Jack G. Brannon, Jr, Austin, Tex; sisters, Clara Ransome and Fay Ebeling, both of Dallas; brother, S.L. Brannon, Jr, Bastrop; and three grandchildren.

R.E. Carr

Robert E. Carr, Sr, MD, a retired Fort Worth surgeon, died Jan 19, 1987. He was 68.

Dr Carr was born in Sampson County, North Carolina, and graduated from the Medical College of Virginia in 1943. Following graduation, he was a battalion surgeon in the 103rd and 45th Infantry Divisions in the Army. For his military service, Dr Carr received the Bronze Star and Presidential Unit Citation.

Dr Carr served as surgical service chief at the Veterans Administration Hospital in Tucson and then as clinical instructor in thoracic surgery at Southwestern Medical School before moving to Fort Worth in 1957. He was surgeon in chief at Harris Hospital-Fort Worth Medical Center from 1965 to 1966 and was chief of the surgery division there from 1976 to 1978. He later served as chief surgeon at Fort Worth Children's and Elmwood Hospitals.

Dr Carr was a past president of the Fort Worth-Tarrant County Tuberculosis Society, Texas Thoracic Society, Tarrant County Heart Association, Fort Worth Surgical Society, and the Southern Thoracic Surgical Association. He was a founding member of the American Trauma Society and the Society of Thoracic Surgeons.

Survivors include his wife, Clara Racobs Carr, Fort Worth; daughters, Betty Jane St Clair, Dublin, Va, and Nancy Ralston Carr, Fort Worth; son, Robert E. Carr, Jr, Fort Worth; sisters, Margaret Anderson, Clinton, NC, and Lucille Daughtry, Miami, Fla; and four grandchildren.

C.L. Gary, Jr

Charles L. Gary, Jr, MD, 65, died Dec 27, 1986. Dr Gary had been in general practice in Corsicana since 1949.

A native of Kenedy, Tex, Dr Gary received his premedical education at The University of Texas at Austin and graduated from Southwestern Medical School, Dallas, in 1945.

Following graduation, Dr Gary served an internship at Baylor Medical Center, Dallas. From July 1947 until June 1948 he served as a medical officer at Bruns General Hospital in Santa Fe, NM, and at the Station Hospital at Camp Stoneman, California. He opened his office in Corsicana in September 1949.

Dr Gary was a past president of the Navarro County Medical Society and the Navarro County chapter of the American Cancer Society.

In May 1986, Dr Gary was accorded the status of life membership in the Texas Medical Association.

Surviving family members include his wife, Jean Gary, Corsicana; daughter, Sylvia McMahon, Garland, Tex; sons, Joe Gary, Austin, and Bob Gary, Mesquite; brothers, Howard Gary, Harlingen; Bill Gary, Houston; and Jim Gary, Sugar Land, Tex; sister, Mildred McGoldrick, Kenedy; and two grandchildren. A son, Charles Gary, preceded him in death.

S.T. Garza

Simon T. Garza, MD, a San Antonio anesthesiologist, died Jan 28, 1987. He was 55.

Born in Benavides, Tex, Dr Garza received his premedical education at The University of Texas at Austin. In 1961 he graduated from the University of Nuevo Leon in Monterrey, Mexico. He moved to San Antonio in 1964 for an internship at Robert B. Green Memorial Hospital. He continued his training at the same hospital with a residency in anesthesiology. In 1968 he went into private practice.

During 1953–1955, Dr Garza served in the US Army.

He is survived by his wife, Jean Garza, San Antonio; son, Simon T. Garza, Jr, Fort Worth, Tex; daughter, Dr Carmen T. Garza, San Antonio; stepson, Michael L. Winans, San Antonio; stepdaughter, Elizabeth Paige Winans, College Station, Tex; brothers, Willie Garza, Kingsville, Tex and Tony Garza, El Paso, Tex; and sisters, Janie Garza, Austin, Tex; Amelia Wuest, Pampa, Tex; and Corinne Fuentes and Vera Rios, both of Corpus Christi, Tex.

L.A. Hall

Lee Aker Hall, MD, 73, a Fort Worth physician, died Jan 15, 1987. Dr Hall, an obstetrician and gynecologist, practiced in St Louis, Mo, for 30 years before moving to Fort Worth in 1979.

Born in St Louis, Mo, Dr Hall received his medical degree in 1940 from St Louis University School of Medicine. He served a two-year internship at the City-County Hospital in Clayton, Mo. After serving as a flight surgeon in the Army Air Corps during World War II, Dr Hall was discharged as a major and returned to St Louis for a residency in obstetrics and gynecology. He practiced there until he moved to Fort Worth in 1979 to begin work with the Community Hospice Program of St Joseph Hospital.

Survivors include his wife, Ellecia Kleuser Hall, Fort Worth; daughter, Kate Hall McMullan, New York City; stepsons, Murphy Kleuser, Thomas M. Kleuser, and Lawrence Kleuser, and stepdaughters, Mary K. Anderson, Colleen M. Kleuser, and Ann Butchard, all of Fort Worth; brothers, Preston Hall, MD, and Robert Hall, MD, and sister, Grace Hall Kettenbrink, all of St Louis; one grandchild; and eight stepgrandchildren.

J.B. Johnson, Jr

Jesse B. Johnson, Jr, MD, a retired Galveston radiologist, died Jan 14, 1987, at age 66.

Dr Johnson was born in Temple, Tex, and attended The University of Texas at Austin, receiving a bachelor of arts de-

gree. In 1945 he graduated from The University of Texas Medical Branch at Galveston and then returned to Temple for an internship at Scott and White Hospital. During 1946–1948, Dr Johnson served as a medical officer in the US Army. Following military service he began his practice in Galveston. He continued his practice until his retirement in 1986. For the past five months, he had been living in Yuma, Ariz.

Dr Johnson was a past president of the Galveston County Medical Society.

Surviving family members include his wife, Melba Johnson, Yuma, Ariz; daughter, Lulu Johnson, Denton, Tex; sons, Jesse B. Johnson III, MD, Georgetown, Tex; George F. Johnson, Texas City, Tex; and Capt Edward I. Johnson, Yuma, Ariz; and ten grandchildren.

L. Marroquin

Luis Marroquin, MD, a Port Arthur obstetrician-gynecologist, died Jan 30, 1987. He was 63.

A native of Laredo, Tex, Dr Marroquin received his premedical education at The University of Texas at Austin. In 1947 he graduated from The University of Texas Medical Branch at Galveston. After an internship at Santa Rosa Medical Center in San Antonio, Dr Marroquin practiced in Dallas. During 1950–1952, he served in the US Navy Medical Corps. He then completed a residency in obstetrics and gynecology at Hermann Hospital in Houston before beginning his practice in Port Arthur.

Dr Marroquin is survived by his wife, Doris Marroquin, Port Arthur; daughters, Mary Kathryn Casey, Palm Dale, Calif; Maureen Marroquin, Houston; and Monique Marroquin and Roxanne Marroquin, both of Austin, Tex; sons, Luis Marroquin, Jr, Houston; Marc Marroquin, Austin, Tex; Paul Marroquin, Arlington, Tex; Eric Marroquin, Port Arthur, Tex; Dr Robert Marroquin, Orange, Tex; Timothy Marroquin, Port Arthur; Michael Marroquin, Austin; and Gregory Marroquin, Great Lakes Naval Station; brother, Ben Marroquin, Austin, Tex; and 19 grandchildren.

P.K. Mason

Porter K. Mason, MD, Dallas, died Jan 4, 1987. He was 77.

A native of Dallas, Dr Mason was a 1934 graduate of Baylor College of Medicine. He remained in Dallas to intern at Parkland Memorial Hospital and then to begin a practice of internal medicine there. During World War II, Dr Mason served in the US Army Medical Corps.

Surviving family members include his wife, Jeanette Mason, Dallas; daughter, Portia Jean Mason; son, Porter K. "Brick" Mason, Jr; and grandson, Porter K. "Stoney" Mason III.

B.R. Richardson

Bobby Ray Richardson, MD, a Big Spring general practitioner and obstetrician/gynecologist, died Jan 28, 1987, in Lubbock, Tex.

Dr Richardson, 54, was a native of Sherman, Tex. He received a bachelor of arts degree from Austin College in Sherman in 1955 and then received his medical degree from Southwestern Medical School in Dallas in 1959. After an internship at the Veterans Administration Hospital in Dallas, Dr Richardson served in the US Navy for two years. He continued his training at the Rusk (Tex) State Hospital, and practiced in Groveton and Overton, Tex, before moving to Big Spring.

Dr Richardson was listed in the 1973–1974 edition of *Who's Who in Texas*.

He is survived by his wife, Pat Richardson, and daughter, Cathi Richardson, both of Big Spring.

A. T. Talley, Jr

Arthur T. Talley, Jr, MD, a retired Houston physician, died Jan 27, 1987. Dr Talley, 70, had been living in LaGrange.

He was born in Conroe, Tex, and attended The University of Texas at Austin, receiving a bachelor of arts degree in 1938. In 1945 he graduated from The University of Texas Medical Branch at Galveston. After an internship at Jefferson Davis Hospital in Houston, Dr Talley served in the US Navy. He returned to Houston, where he completed a residency at Jefferson Davis Hospital and began a practice of obstetrics and gynecology.

Dr Talley is survived by his wife, Elizabeth Talley, MD, LaGrange; son, Arthur Talley III, Austin, Tex; daughters, Edith Wilson and Phyllis Hickey, both of San Antonio, and Elizabeth Tillison, Houston; brother, Monroe Talley; sisters, Otey Maxwell and Hallie Elizabeth Judd; and five grandchildren.

B.W. Wyatt

Byron W. Wyatt, MD, a San Antonio urologist, died Jan 25, 1987. Dr Wyatt, 86, was an honorary member of the Texas Medical Association.

A native of San Antonio, Dr Wyatt practiced there from 1926 until 1981. He was a 1926 graduate of The University of Texas Medical Branch at Galveston. He began his practice in San Antonio after an internship at St Joseph Hospital in Houston. Dr Wyatt served as chief of staff at both Santa Rosa Medical Center and Nix Hospital, San Antonio.

During 1942–1946, Dr Wyatt served in the US Air Force at Kiesler Field in Biloxi, Miss.

Survivors include his wife, Mary Wyatt, San Antonio; niece Helen Buescher, San Antonio; and great-nieces, Joy Wyatt, Lubbock, Tex, and Kay Barry, San Antonio.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

J. G. BRANNON, SR
Houston, 1913–1987

R. E. CARR
Fort Worth, 1918–1987

C. L. GARY, JR.
Corsicana, 1921–1987

S. T. GARZA
San Antonio, 1931–1987

L. A. HALL
Fort Worth, 1914–1987

J. B. JOHNSON, JR
Galveston, 1920–1987

L. MARROQUIN
Port Arthur, 1923–1987

P. K. MASON
Dallas, 1909–1987

B. R. RICHARDSON
Big Spring, 1932–1987

A. T. TALLEY, JR
Houston, 1915–1987

B. W. WYATT
San Antonio, 1901–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audio-visual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student $ 5.00 ☐ Patron $ 100.00
☐ Sustaining $15.00 ☐ Life $1,000.00
☐ Subscribing $25.00

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

To show you how many hypertensives stayed on INDERAL® LA (PROPRANOLOL HCl) after a major nationwide trial...

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL® LA stayed on INDERAL LA.[1*]

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.
A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

NOW AVAILABLE...
NEW LOW DOSE
INDERAL LA 60 mg
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Please see next page for brief summary of prescribing information.

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period, the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

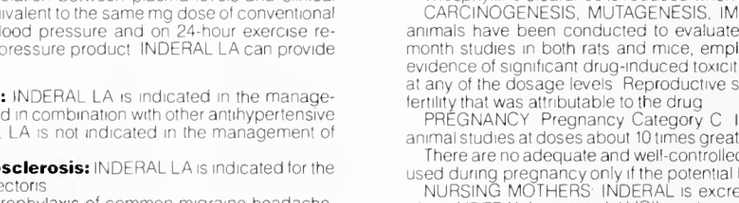
INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension. It may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.



WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe hea disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as rese pine should be closely observed if INDERAL is administered. The added catecholamine blocking action may produce an excessive reduction of resting sympathetic nervous activit which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostati hypotension.

Caution should be exercised when patients receiving a beta blocker are administered calcium-channel-blocking drug, especially intravenous verapamil, for both agents may de press myocardial contractility or atrioventricular conduction. On rare occasions, the concom tant intravenous use of a beta blocker and verapamil has resulted in serious adverse reaction especially in patients with severe cardiomyopathy, congestive heart failure or recent myoca dial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasm levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly wi propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitant with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination an increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies animals have been conducted to evaluate toxic effects and carcinogenic potential. In t month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was n evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effec at any of the dosage levels. Reproductive studies in animals did not show any impairment fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic animal studies at doses about 10 times greater than the maximum recommended human dos

There are no adequate and well-controlled studies in pregnant women. INDERAL should b used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercise when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rare required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypote sion, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of th Raynaud type.

Central Nervous System: Light-headedness, mental depression manifested by insomni lassitude, weakness, fatigue; reversible mental depression progressing to catatonia, visu disturbances; hallucinations, vivid dreams; an acute reversible syndrome characterized b disorientation for time and place, short-ter memory loss, emotional lability, slight clouded sensorium, and decreased perfo mance on neuropsychometrics. For immedia formulations, fatigue, lethargy and vivi dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epiga tric distress, abdominal cramping, diarrhe constipation, mesenteric arterial thrombosi ischemic colitis.

Allergic: Pharyngitis and agranulocytosi erythematous rash, fever combined with ac ing and sore throat, laryngospasm and respir tory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpur

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has bee reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotenc and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involvir the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have n been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in sustained-release capsule for administration once daily. If patients are switched from INDER Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeut effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute f INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration ma be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 m INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may b increased to 120 mg once daily or higher until adequate blood-pressure control is achieve The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 6 mg may be required. The time needed for full hypertensive response to a given dosage variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL L once daily, dosage should be gradually increased at three- to seven-day intervals until optim response is obtained. Although individual patients may respond at any dosage level, th average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value ar safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (se WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL L once daily. The usual effective dose range is 160-240 mg once daily. The dosage may b increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is n obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy shou be discontinued. It may be advisable to withdraw the drug gradually over a period of seve weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenol atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145 1321-1323.

R 7119/58

Ayerst® AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laborator

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Ablow KR: *Medical School: Getting In, Staying In, Staying Human.* Baltimore, Williams & Wilkins, 1987.

Annonier C: *Female Breast Examination. A Theoretical and Practical Guide to Breast Diagnosis.* New York, Springer-Verlag, 1986.

Arena JM (ed): *Poisoning. Toxicology, Symptoms, Treatments,* ed 5. Springfield, Ill, Charles C Thomas, 1986.

Blandy J: *Operative Urology,* ed 2. Boston, Blackwell Scientific Publications, 1986.

Breneman JC (ed): *Handbook of Food Allergies.* New York, Marcel Dekker, Inc, 1987.

Browning GG: *Clinical Otology and Audiology.* Boston, Butterworths, 1986.

Cairns JE (ed): *Glaucoma* (2 vols). Orlando, Fla, Grune & Stratton, 1986.

Caroscio JT (ed): *Amyotrophic Lateral Sclerosis. A Guide to Patient Care.* New York, Thieme Medical Publishers, Inc, 1986.

D'arcy PE, Griffin JP (eds): *Iatrogenic Diseases,* ed 3. New York, Oxford University Press, 1986.

Georgiade NG, Georgiade GS, Riefkohl R, et al (eds): *Essentials of Plastic, Maxillofacial, and Reconstructive Surgery.* Baltimore, Williams & Wilkins, 1987.

Grauer K, Curry RW Jr: *Clinical Electrocardiography. A Primary Care Approach.* Oradell, NJ, Medical Economics Books, 1987.

Hawks RL, Chiang CN (eds): *Urine Testing for Drugs of Abuse.* Rockville, Md, National Institute on Drug Abuse, 1986.

Howell RR, Morriss FH Jr, Pickering LK (eds): *Human Milk in Infant Nutrition and Health.* Springfield, Ill, Charles C Thomas, 1986.

Imber JB: *Abortion and the Private Practice of Medicine.* New Haven, Conn, Yale University Press, 1986.

Joan P: *Preventing Teenage Suicide. The Living Alternative Handbook.* New York, Human Sciences Press, Inc.

Mandel WJ: *Cardiac Arrhythmias. Their Mechanisms, Diagnosis, and Management,* ed 2. Philadelphia, J.B. Lippincott Company, 1987.

McKenna RJ, Murphy GP (eds): *Fundamentals of Surgical Oncology.* New York, Macmillan Publishing Company, 1986.

McMullin RE: *Handbook of Cognitive Therapy Techniques.* New York, W.W. Norton & Company, 1986.

Morrissey JM, Hofmann AD, Thrope JC: *Consent and Confidentiality in the Health Care of Children and Adolescents. A Legal Guide.* New York, The Free Press, 1986.

Perkins ES, Hansell P, Marsh RJ: *An Atlas of Diseases of the Eye,* ed 3. New York, Churchill Livingstone, 1986.

Pimental E: *Oncogenes.* Boca Raton, Fla, CRC Press, Inc, 1986.

Pollak EW (ed): *Thoracic Outlet Syndrome. Diagnosis and Treatment.* Mount Kisco, NY, Futura Publishing Co, Inc, 1986.

Quay HC, Werry JS (eds): *Psychopathological Disorders of Childhood,* ed 3. New York, John Wiley & Sons, 1986.

Rintoul RF (ed): *Farquharson's Textbook of Operative Surgery,* ed 7. New York, Churchill Livingstone, 1986.

Semm K: *Operative Manual for Endoscopic Abdominal Surgery.* Chicago, Year Book Medical Publishers, Inc, 1987.

Snook ID Jr, Kaye EM: *A Guide to Health Care Joint Ventures.* Rockville, Md, Aspen Publishers, Inc, 1987.

Taylor KJW, Jacobson P, Talmont CA, et al: *Manual of Ultrasonography.* New York, Churchill Livingstone, 1980.

Van Middlesworth L (ed): *The Thyroid Gland. A Practical Clinical Treatise.* Chicago, Year Book Medical Publishers, Inc, 1986.

Wold CR: *Managing Your Medical Practice.* New York, Matthew Bender, 1986.

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7558

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Somsai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
Colon and Rectal Surgery Colonoscopy
Laser Hemorrhoidectomy, Out-patient or In-patient

Barnett Tower, Baylor Medical Plaza, 3600 Gaston Avenue, Suite 411, Dallas, Texas 75246; 214 821-4300, 350-2441
122 W. Colorado, Dallas, Texas 75208; 214 942-8734

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism

Practice Limited to Endocrinology & Diabetes

5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service

. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery

DAVID J. ZEHR, MD—Microsurgery

ARNOLD V. DiBELLA, MD

Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA

Diplomates American Board of Orthopaedic Surgery

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops

. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery
JACINTO ZAMBRANO, MD
Surgery of the Hand

30th & Red River, Austin, Texas 7B704
24 HR# S12 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

B03 West Terrell, Fort Worth, Texas 76104
Telephone 817 B77-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3B00 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 B23-7090
Medical City Dallas II, 7777 Forest Lane, Suite B116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
751S S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 770B2; 713 55B-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 B26-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
W. Robert Hudgins, MD
Richard H. Jackson, MD
Mark J. Cwikla, MD
Casey E. Patterson, MD (Retired)

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620, Dallas, Texas 7523S; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905; Dallas, Texas 75231; 214 369-7596

1302 Lane St., Copper Tree Medical Center, Suite 300, Irving, Texas 75062; 214 259-476B

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American Board of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; B17 336-1300

TMA HealthWise Series
. . . Another service of your association

ARLINGTON ASSOCIATION OF
NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; B17 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 770S4
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES
Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD
Diseases and Surgery of the Retina and Vitreous
7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or 800 B72-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 821-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 75204
214 S21-1153; 1-B00-442-5376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 78205; 512 226-5191

TMA Action monthly newsletter
. . . Another service of your association

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-800-833-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS

Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD

John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas 77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002; 713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas 77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030; 713 797-1777

Heights Medical Eye Center, 535 West 20th Street, Houston, Texas 77008; 713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Shubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery

A Professional Association

2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

TMA Physicians Benevolent Fund

. . . Another service of your association

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA
ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES
Dorothy Patras, MD

Anatomic Pathology and Consultation in
Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.
J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.
P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD
Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY
7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES
Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery
6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

VALENTIN GRACIA, MD, FACS, FICS
Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

FORT WORTH PLASTIC SURGERY CLINIC
David A. Grant, MD, FACS
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD
Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

WILLIAM E. BARNES, MD
Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN
Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery
Jacinto Zambrano, MD
Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES
302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD
Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD
Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS

Excellence in Form & Function
Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 558-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

PSYCHIATRY

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child, Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 381-7181

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

Representing TMA's legislative views
. . . Another service of your association

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS

Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

REGIONAL CARDIOVASCULAR CENTER

Cardiac, Vascular and Thoracic Surgery

Mario O. Kapusta, MD
Phillip R. Adams, MD

925 E. Dawson, Tyler, Texas 75701
214 593-9022

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS

Diplomate, American Board of Urology

Adult and Pediatric Urology

Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES

Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology

221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

C. F. SKRIPKA, JR, MD, FACS

Urology, Andrology & Neurourology

1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

TMA Physician Membership Directory
. . . Another service of your association

HELP YOUR COLLEAGUES HELP THEMSELVES

It's a fact. A shortage of funds can prevent an impaired physician from getting the help he or she needs and wants.

The Physician Health and Rehabilitation Assistance Fund was established by the Texas Medical Association Committee on Physician Health and Rehabilitation primarily to provide assistance to impaired physicians who cannot afford treatment for substance abuse or other problems.

Financial assistance is provided in the form of a loan, with funds usually sent directly to providers of care.

Please help TMA help your colleagues. Support the TMA Physician Health and Rehabilitaton Assistance Fund. Your contribution is tax deductible.

If you would like to know more about how the fund assists indigent, impaired physicians, call TMA at 512/477-6704, ext. 141.

TMA PHYSICIAN HEALTH AND REHABILITATION ASSISTANCE FUND

I want to support the Physician Health and Rehabilitation Assistance Fund. Enclosed is my tax deductible contribution in the amount of:

_____ $25 _____ $100

_____ $50 _____ $ _____

Name _____

Address _____

_____

_____

Please return this form to: Texas Medical Association, Physician Health and Rehabilitation Assistance Fund, 1801 North Lamar Blvd., Austin, Texas 78701.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

West Texas—Big Spring State Hospital. Psychiatrist, child psychiatrist and general physician positions available, board certified or eligible. Texas license required. JCAH fully accredited facility. Excellent benefit package including 40-hour work week, malpractice protection, retirement, and tax-sheltered income program. Beautiful, friendly sunbelt location. City of 25,000 with good schools and excellent housing. Contact Superintendent, Big Spring State Hospital, P.O. Box 231, Big Spring, Texas 79721-0231; 915 267-8216. An EO/AAE.

Staff Physician, Austin, Texas—Position available for a staff physician in the medical services division of a state residential facility serving 600 mentally retarded clients. Must be able to devise individual treatment plans, evaluations, and delegate an effective course of treatment to other medical and clinical personnel. Requires graduation from an approved medical school, and completion of internship and/or residency program in an approved hospital, and possess a license to practice in Texas, plus two to four years experience as a physician with superior and administrative capabilities of leadership. Board certification may be accepted in lieu of experience. Annual salary of $54,384 plus up to $3,400 additional compensation as well as excellent State fringe benefits. Send applications and/or vitae to Mr. Mauricio Zuniga, Personnel Director, Austin State School, P.O. Box 1269, Austin, Texas 78767; 512 454-4731.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas: Full time ED positions available in the greater Houston area with local group. Please send CV to STAT Physicians, P.O. Box 79348, Houston, Texas 77279-9348; or call 713 468-7810.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Lucrative private practice within one hour of San Antonio. Modern hospital, new professional office building adjacent to hospital. No evening or weekend ER call required. Share call with young, BC family physician. OB required. Hunting mecca. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Within one hour of Austin. Young, board certified family physicians seek associate for fee-for-service group practice in young, progressive community of 5,600. Modern hospital. Excellent, award-winning schools; organized sports; strong industry. Competitive incentive package. Reply, in confidence, to: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Family Physician, BC/BE—Recruiting physicians interested in permanent and professionally stimulating unique family practice group. Excellent salary and generous benefits. Eligibility for partnership/shareholding after one year. Extensive support system and modern facilities. An opportunity to practice free of business worries. Locational opportunities and medical center nearby. Send CV to Park Avenue Private Physicians, Inc., P.O. Box 441292, Houston, Texas 77244; 713 668-4600.

Practice family medicine with the people in rural Iowa communities where the quality of life is superb. Solo and group practice opportunities available including guaranteed salaries and full benefit packages. For an immediate response please call 1-800-247-3121, ext. 8204 (USA).

Friendly rural community in south-central Texas looking for family practice doctor who enjoys quiet country living. Fully equipped and staffed clinic with well established practice. Rotating call at nearby hospital every 5th weekend and one night per week. Call Moulton Community Clinic 512 596-4675 between 8 am and 5 pm.

Internal Medicine

Internist with an interest in gastroenterology needed to join a cardiologist/internist in a rural Louisiana town from July, 1987. Attractive first year salary, benefits, and early partnership. If interested, send CV to Manzoor H. Qazi, MD, 1101-A Port Arthur Terrace, Leesville, Louisiana 71446.

Internist needed for city of 20,000 in Austin-San Antonio corridor. Serves population of 40,000. Superlative office help to stay on. Will introduce to community. Income derived from diverse sources including hospital EKG. Contact Richard Clemons, MD, 908 East Court, Seguin, Texas 78155; 512 379-6821.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

Expanding 21 physician multispecialty group has two openings: Pediatrician and OBG. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Board Qualified OBG Needed—Take over 31-year established OBG practice with trained, qualified office staff and low overhead. Adjacent to area's largest major hospital where founder, as former Chief of Staff, practiced. Excellent physician and community support with adequate cross-coverage available. Reasonable office practice with growth potential for additional physician. Practice profile available to qualified physicians. Send inquiries in confidence to Golden Triangle Practice Search Committee, Attn: L. Marroquin, Jr., Trustee, 4054 Nenana, Houston, Texas 77025.

Pediatrics

Expanding 21 physician multispecialty group has two openings: Pediatrician and OBG. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Board certified or eligible, immediate opening for full term or locum tenens private practice position in Dallas-Fort Worth metroplex to aggressive professional. There are in-patient and out-patient services. Must be knowledgeable in ultrasound, special procedures and CT. Please reply to Ad-637, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Acute care 166-bed hospital seeks MD board eligible/board certified invasive radiologist. Facility is equipped with modern CT, ultrasound, and nuclear medicine equipment. Located in suburb of Dallas County. Please send your confidential resume to Ad-652, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Radiologist Wanted—Board certified/board eligible. Excellent salary and fringe benefits. Experience in CT scan and MRI preferred. Please send CV to Ad-658, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Other Opportunities

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an out-patient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129. Toll free in Texas 1-800-331-8472.

The Medical and Surgical Clinic of Sherman, Texas is currently expanding its multispecialty group to include specialists in pediatrics, ophthalmology and otolaryngology. Interested parties please contact Ron Marshall, Administrator, 214 893-5138 (collect).

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians

Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or BE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78539; 512 383-1481.

Austin—Desire two physicians to divide 84 hour week at a primary care clinic on a permanent basis beginning June 1987. Excellent staff, providing quality, sensitive patient care. No call or inpatient responsibilities. Please contact Elizabeth Adams, 6140 West Highway 290, Austin, Texas 78735; 512 892-4820.

Otorhinolaryncologist needed to join 18 physician multispecialty group. High first year guarantee in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720.

Expanding Texas Multispecialty Group—Dallas/Fort Worth area, requires BE/BC physicians: internal medicine, OBG, family practice, orthopedic surgery, anesthesiology, general surgery, pediatrics, ENT, urology, cardiology, dermatology, radiology, psychiatry. Competitive salary. Extensive benefits. Direct inquiry, CV to: Medical Director, Permanente Medical Association of Texas, 12720 Hillcrest, Suite 600, Dallas, Texas 75230.

Hall-Bennett Hospital needs a family practitioner and/or internist to fill vacancy on clinic staff. This is a splendid opportunity with excellent fringe benefits. If interested contact Administrator at P.O. Box 2071, Big Spring, Texas 79721, or call 915 267-7411 collect.

Emergency and primary care physicians needed. Full-time positions available at desirable hospitals and primary care clinics in Houston, East Texas and Golden Triangle locations. Competitive compensation and benefits package, including company paid malpractice. Call at 713 446-9696. Medical Networks, Inc., P.O. Box 4448, Houston, Texas 77210-4448.

Immediate Opening—Excellent opportunity for new practitioner in fast growing North Austin area. Turnkey operation available to physician willing to share expenses and space in modern completed medical complex. Contact S. X. Rosensweig, DPM, Anderson Mill Medical Clinic, 124111 Hymeadow, Suite 3-F, Austin, Texas 78750; 512 258-5561.

Cardiologists, invasive/noninvasive BC/BE to join two BC cardiologists located in southwest Houston. Good salary, fringe benefits, partnership after two years. Send CV to P. McKenzie, 1919 Landmark, Richmond, Texas 77469.

Psychiatrist—110 bed hospital to assist/develop practice in bedroom community of Fort Worth with access to outdoor sports, good schools, metro amenities. Board eligible/board certified residents considered. High gross income guarantee and marketing support. Contact Mary, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 30338. Call collect 404 641-6411.

A general surgeon or colorectal surgeon is needed for an active surgical practice in Dallas, Texas. Generous first year salary with an opportunity for a gradual partnership starting with second year. Please send CV to P.O. Box 83-5294, Richardson, Texas 75083.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Fred Brinker, Medical Division, ISI, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-0475.

Neurology, Hematology/Oncology, Radiological Oncology—80 miles from Kansas City. 30 miles from 65,000 acre lake. Sedalia, Missouri. Rob Clemens, MD, 816 826-8384 evenings.

Primary Care and Pulmonary—80 miles from Kansas City. 30 miles from 65,000 acre lake. Sedalia, Missouri. Rob Clemens, MD, 816 826-8384 evenings.

Family Practitioner, General Practitioner, General Surgeon, Internal Medicine person—excellent Texas opportunity to practice in one of several lake area communities in the beautiful Piney Woods area of east Texas. Enjoy boating, fishing, hunting, year-around. First year guarantee, etc. Call or send CV to Armando L. Frezza, Medical Support Services, 11509 Quarter Horse Trail, Austin, Texas 78750; 512 331-4164.

OBG, Pediatrician Wanted—Excellent Texas opportunity to practice in a community close to Houston. Enjoy country living at its best with the convenience of Houston within 40 minutes. New high tech 150 bed hospital with good coverage. First year guarantee, etc. Call or send CV to Armando L. Frezza, Medical Support Services, 11509 Quarter Horse Trail, Austin, Texas 78750; 512 331-4164.

Internist and OBG Needed—Work in well-equipped clinic only two minutes from the hospital. Unlimited opportunity with a minimum investment. Contact Clarence Miller, ERA-Consolidated Brokers, Inc., P.O. Box 1270, San Marcos, Texas 78666; 512 353-1125.

Physician Opportunities—Sunbelt. We have unadvertised solo, group and hospital based opportunities for general practice and most specialties. Financial guarantees, benefit packages negotiable. Fee paid. Professionals serving professionals. Send CV to Michael Hess, 5515 New Haven Court, Austin, Texas 78756. Or call 512 459-6411.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include OBG, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-8080; or send CV to Mitchell & Associates, Inc., P.O. Box 1804, Scottsdale, Arizona 85252.

Texas Opportunities—Substantial income guarantees. Solo, association or group in cities, suburbs, large-small towns. Family practitioner, obstetrician-gynecologist, pediatrician, internist, oncologist, neurologist, neurosurgeon, otorhinolaryngologist, rheumatologist. Call or send CV to Nancy McEntire, CPC or Ray Carter, Kemper Resources, 9442 Capital of Texas Hwy. North, Arboretum Plaza 2, Suite 350, Austin, Texas 78759; 512 338-0041.

Texas—Denison—psychiatrist—medium size north Texas community 70 minutes from Dallas, five minutes from Lake Texoma. Psychiatrist with high quality referrals needs hard working, analytical-oriented associate. In and out-patient substance abuse and psychiatry. Details negotiable including first year guarantee. If interested, please send resume to: David R. Baker, MD 1201 West Washington, Denison, Texas 75020. 214 465-7070. EOE.

OPPORTUNITIES SOUGHT

We have physicians who are looking to join solo, partnerships, or multispecialty groups in the Texas area. For more information call Medical Advisory Group, Inc., 214 758-9939.

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. 512 477-6704, ext. 263.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"

locum tenens & permanent placements

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

Family Practice Locum Tenens—Experienced, ABFP, professional liability insurance. Competitive rates. Nu Way Medical Service. 214 677-5302; #2 Crystal Drive, Athens, Texas 75751.

General internist-family practitioner, American graduate, seeking relocation in July 1987. Extensive experience. All situations including practice takeover considered. Urban location preferred. Please reply to Ad-655, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Experienced Houston emergency physician seeking work in a low to moderate volume ER that sees a lot of trauma. Houston or environs. US medical graduate (MD). ACLS and ATLS certified. Call 713 784-1720.

Family practice/Internist seeking purchase of/or association with thriving family practice or established ambulatory care center. Available June 1987. Please reply to Ad-659, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Retired physician (GP) will cover your small hospital or private clinic while your doctor is on vacation or CME. $25 per hour for 24 hour coverage. Daily and weekly rates are available. Call Dr. Robert Franken at 915 944-0448.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than 50% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 18164, Dallas, Texas 75218; 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $1275; Cardionostic Holter recorder (cassette available) from $995. Smallest, slightest Holters update. Fast service (24-48 hrs.) turnover. Hookup kits starting at $4.95. Special introductory offer of three free tests with any purchase or lease of recorder. Cardiologist overread available for $15. If interested call 301 870-3626.

Office Space/Property

North Dallas suburb—up to 3400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 867-6500.

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

Austin—General internist desires to sublet half of 2,200 square foot office in Medical Arts Square. Convenient location one block from St. David's Hospital near university campus. Two exam rooms, one consultation room, chest x-ray facilities, large waiting area, free parking. Terms negotiable. 512 476-9145.

For Lease/Sale, Corpus Christi, Texas—1,811 sq. ft. in new office building. Centrally located to all major hospitals. Multiple subspecialists co-tenants. Breathtaking bay view. Partially furnished. X-ray and lab on site. Call 512 882-9278.

Beach House For Rent—On Corpus Christi Bay. Great view of Corpus Christi. Close to Padre Island, Port Aransas, and Corpus Christi. Sleeps 10 comfortably. 400 foot private, lighted fishing pier. Excellent fishing and swimming. $600 per week. Arrangements also available for motorboat and sailboat. Call Pat Nye at 512 993-9153.

Practices

Gynecology: Houston. Extremely large, gynecology-only practice for sale in Northwest Houston. Practice enjoys an exceptional net income. Doctor retiring. Option to purchase building. 4½ days per week practice. For further details phone 713 771-5011. TMH428.

Medical practice sales and appraisals—We specialize in the valuation and selling of medical practices. If interested in buying or selling a medical practice contact our Brokerage Division at The Health Care Group, 400 GSB Building, Bala Cynwyd, PA 19004; 215 667-8630.

Thriving young family practice for sale. Town of 5,000 near Houston. Includes fully furnished office in leased space, lab equipment and x-ray. 25-bed hospital in town, larger facilities nearby. Great opportunity. Send CV to Ad-653, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale, OBG Practice, Austin, Texas—Well established, lucrative, OBG practice in Austin, Texas. Available in May. 512 477-1105.

Practice For Sale—Dallas, Casa Linda/White Rock East area. Doctor retiring. Well established practice, excellent for internal medicine or family practice. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker. 214 327-7765.

Thriving family practice in Amarillo available for takeover no later than July 1, 1987. Extremely low asking price. Collections May 1986-January 1987, $576,000. Gross May 1986-January 1987, $666,000. Quick action necessary. Tremendous opportunity. Contact Ad-654, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Family Practice For Sale—Northwest of Fort Worth. Well established, successful family practice located just northwest of Fort Worth is for sale. Includes equipment, building, and land. Available in July

1987 or sooner. Contact Lawrence F. Hilek, P.O. Box 171294, Arlington, Texas 76003; 817 467-1607.

Excellent Family Practice For Sale—An excellent family practice opportunity in the middle of bird and deer hunting country is available. Only 30 miles from San Antonio, this practice grossed over 200K last year. No OB, no HMOs and Medicare/Medicaid comprises less than 20% of the practice. Call coverage with other FPs in area. Excellent place to raise family or retire. Priced below one year's net. Terms negotiable. Reply to Mr. Jack Clark, 713 270-5281.

Houston, established minor emergency, family practice and weight reduction clinic at strategic location. X-ray, lab. Low rent. No OB. Big growing potential. Grossed 256K in 1986. For sale 129K. No financing. Prime real estate optional. Serious inquiries only. Reply to Ad-660, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. First time offer, exceptional opportunity!

Primary care-geriatric practice for sale. Gross 300K. No downpayment. Price 75K. Please reply to Ad-661, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Dallas, Gynecology—Rewarding gynecological practice, Baylor Hospital area, offered by retiring physician. Board eligible or certified candidates only. Unusual benefits; attractive option to own office space in joint venture medical building. Please reply to Ad-651, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale, General Practice—Near downtown Houston, two blocks from major freeway. Ten minutes from the Medical Center. Solo practice. Generated $200,000+ last year, operating half days. 1,774 sq. ft. of office space in doctors medical plaza; fully equipped. Four treatment rooms and lab and x-ray. Terms negotiable. Contact Mrs. Zal H. Sanders, 9606 Briar Forest Drive, Houston, Texas 77063.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite 1-V, Richardson, Texas 75080. Contact Don Lewis at 214 437-1180 office, or 214 238-7129 evenings.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

Advertising Rates & Data: Regular classified advertising sells for $39. (US currency) per issue for 50 words or less, payable in advance. Display classified advertising sells for $70. per column inch, per month. A variety of typefaces, logos and borders may be used in display classified ads. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings cannot be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Federal laws prohibit references to race, color, religion, sex, national origin, or age unless bona fide occupational qualifications. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Twelve alternatives to lashing out at your kid.

You don't have to lift a hand to hurt your child. Words hit as hard as a fist. The next time everyday pressures build up to such a pitch that you feel like lashing out...stop! And try any of these simple alternatives. Remember, take time out. Don't take it out on your kid.

1. Put your hands over your mouth. Count to 10. Or better yet, 20.
2. Stop in your tracks. Press your lips together and breathe deeply.
3. Phone a friend.
4. Phone the weather.
5. Say the alphabet out loud.
6. If someone can watch the children, go outside and take a leisurely walk.
7. Take a hot bath or splash cold water on your face.
8. Pick up a pencil and write down your thoughts.
9. Close your eyes and imagine you're hearing what your child hears.
10. Turn on the radio or TV.
11. Hug a pillow.
12. Write for prevention information: National Committee for Prevention of Child Abuse, Box 2866, Chicago, IL 60690.

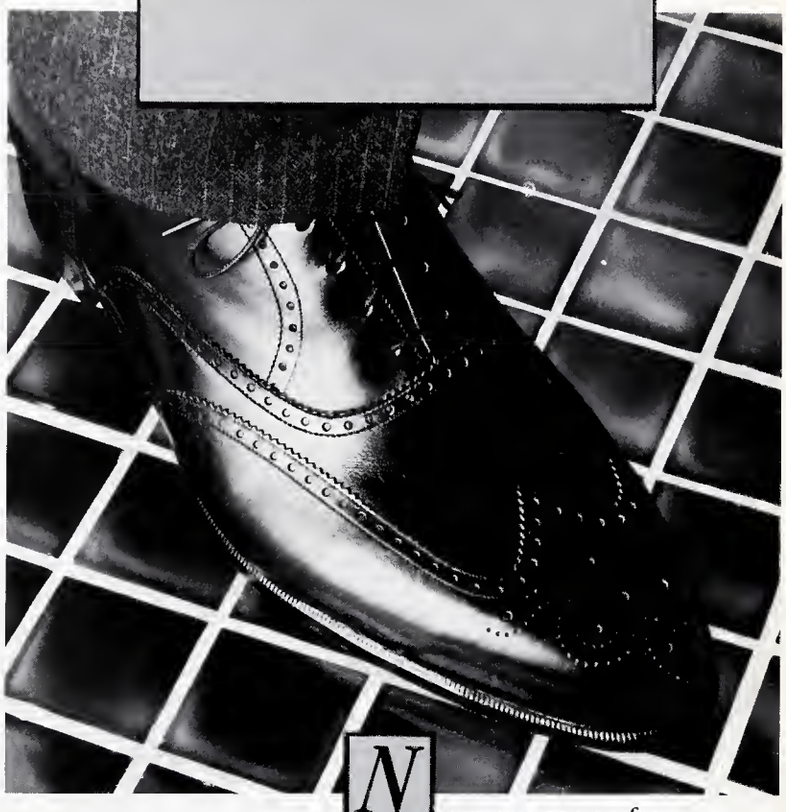
Take time out. Don't take it out on your kid.

Advertising Directory

Air Force	54
Air Force Reserve	10
American Physicians Insurance Exchange	24
American Physicians Life Insurance	41
Ayerst Laboratories	73–76
BMW Center	26
Campbell Laboratories, Inc.	57
Choice Investment Products	31
Crosslands Medical Complex	48, 49
Diagnostic Clinic of Houston	69
Family Practice Recertification	10
Houston Marriott Medical Center	89
I. C. System, Inc.	78
Kanaly Trust Company	47
Knoll Pharmaceutical	17, 18, 19, 37, 38
Eli Lilly & Company	36
Marion Laboratories, Inc.	55, 56
McNeil Pharmaceutical	25
The Medical Protective Company	13
MEDS	4
Reynolds + Reynolds	11
Roche Laboratories	1, 2, 21
Scott and White Clinic	Back Cover
Michael R. Sharp, Attorney	2nd Cover
Spring Shadows Glen	2nd Cover
Starlite Village Hospital	47
Texas Medical Association	
Medical Market Analysis	19
Memorial Library	72
Texas Medical Association Insurance Program	14
Texas Medical Liability Trust	42
Timberlawn Psychiatric Hospital	Back Cover
The University of Texas Health Center at Tyler	57
The Upjohn Company	35
Vestra-Subco, Inc.	54
Warm Springs Rehabilitation Hospital	3rd Cover
Texas Physician's Directory	79–85
Classified Advertising	86–88

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

The Only Transportation You'll Need in the Medical Center.



Now you can go from here to there in the Medical Center and never get in your car. Not once. In fact, the Marriott Hotel is strategically located a few feet from everything, from the world renown Texas Heart Institute and Texas Children's Hospital to the Total Health Care Center at Methodist Hospital and more.

After you return from your medical appointment or an important business meeting, we'll greet you with your very own luxurious, comfortable room, our comprehensive fitness center and all the special amenities you've come to expect from any four star Marriott hotel. The Marriott Hotel in the Medical Center. It's the only place to stay if you're going places in the Medical Center. For reservations, call 713/796-0080 or toll free at 1-800-228-9290 today.

HOUSTON Marriott® MEDICAL CENTER

6580 Fannin Street ◇ Houston, Texas 77030 ◇ 713/796-0080

COURSES

JUNE

Aerospace Medicine

June 21-26, 1987
INTERNATIONAL SPACE LIFE SCIENCES SYMPOSIUM: THREE DECADES OF LIFE SCIENCE IN SPACE. Omni Shoreham Hotel, Washington, DC. Fee $125. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Forgac or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-4941

General Medicine

June 5, 1987
SOLVING THE PUZZLE OF ALCOHOLISM. Holiday Inn Riverwalk, San Antonio. Fee $50. Category 1, AMA Physician's Recognition Award; 5 hours. Contact Robin Herskowitz, Texas Research Society on Alcoholism, 4314 Medical Parkway, #300, Austin, TX 78756 (512) 454-0022

June 27, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. Houston. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Obstetrics and Gynecology

June 17-20, 1987
MENOPAUSE: TREATMENT STRATEGIES AND CONSEQUENCES . South Padre Island Hilton Hotel, South Padre Island, Tex. Fee $150 physicians before May 2, $175 physicians after May 2, $100 residents, $75 nurses and allied health professionals. Category 1, AMA Physician's Recognition Award; 17 hours. Contact Office of Continuing Medical Education, Scott and White Clinic, Temple, TX 76508 (817) 774-4073

Orthopedic Surgery

June 5-7, 1987
SOUTHWESTERN ORTHOPEDIC SURGERY REVIEW. Dallas. Fee $425. Category 1, AMA Physician's Recognition Award; 25 hours. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

June 11-13, 1987
CHARLES GREGORY VISITING PROFESSORSHIP. Dallas. Fee TBA. Credit TBA. Contact Jim Montgomery, MD, Orthopedic Surgery, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3869

Otolaryngology

June 18-20, 1987
18TH ANNUAL OTOLARYNGOLOGY CONFERENCE/PEDIATRIC OTOLARYNGOLOGY UPDATE 1987. San Luis Hotel, Galveston, Tex. Fee $250 physicians, $125 residents. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Martha Berlin, Office of Continuing Education, 3.324 Learning Center, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Pediatrics

June 8-12, 1987
ACUTE CARE PEDIATRICS: REVIEW AND UPDATE OF THE STATE OF THE ART. Mariner's Inn, Hilton Head Island, SC. Fee $325 physicians, $225 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 25 hours. AAFP prescribed. Contact Lila Lerner or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-4941

June 11-13, 1987
1987 ANNUAL PEDIATRIC REVIEW AND UPDATE. San Luis Hotel, Galveston, Tex. Fee $275 before May 18, $315 after May 18. Category 1, AMA Physician's Recognition Award; 15 hours. Contact Gayle Norris, Office of Continuing Education, Learning Center J-34, The University of Texas Medical Branch, Galveston, TX 77550-2782 (409) 761-2934

Sports Medicine

June 26-27, 1987
5TH ANNUAL CONFERENCE ON INNOVATIONS IN SPORTS MEDICINE. The University of Texas Medical Branch, Learning Center, Galveston, Tex. Fee $150 physicians, $75 residents and nonphysicians. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Gayle Norris, Office of Continuing Education, 3.324 Learning Center, UTMB, Galveston, TX 77550-2782 (409) 761-2934

Surgery

June 4-7, 1987
WORKSHOPS IN GYNECOLOGICAL MICROSURGERY INCLUDING USE OF THE LASER AND OPERATIVE LAPAROSCOPY. Margo Perot Women's and Children's Hospital, Presbyterian Healthcare Center, Educational Classrooms, Dallas. Fee $825 basic workshop for practicing physicians, $725 basic workshop for residents and fellows, $900 advanced workshop for practicing physicians, $825 advanced workshop for residents and fellows. Category 1, AMA Physician's Recognition Award; 25 hours. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Lane, Dallas, TX 75231 (214) 696-8458

AUGUST

Internal Medicine

Aug 3-7, 1987
7TH ANNUAL INTERNAL MEDICINE REVIEW. South Padre Island Hilton Hotel, South Padre Island, Tex. Fee TBA. Credit TBA. Contact Office of Continuing Medical Education, Scott and White Clinic, Temple, TX 76508 (817) 774-4073

SEPTEMBER

Endocrinology

Sept 30, 1987
CURRENT THERAPY IN DIABETES. Houston. Contact Carol Soroka or Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

OCTOBER

Ophthalmology

Oct 9, 1987
CURRENT CONCEPTS IN GLAUCOMA MANAGEMENT. Dallas. Contact Ann Parchem, Division of Continung Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Radiology

Oct 30-Nov 1, 1987
DIAGNOSTIC RADIOLOGY UPDATE. Dallas. Contact Dolly Christensen, Department of Radiology, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2502 or 688-2166

Surgery

Oct 30-31, 1987
GENERAL SURGERY UPDATE, 1987. Houston. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

NOVEMBER

Gastroenterology

Nov 14, 1987
GASTROINTESTINAL ENDOSCOPY: PERSPECTIVES AND REFLECTIONS. Houston. Contact Lila Lerner or Vicki Forgac, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Internal Medicine

Nov 20-21, 1987
UPDATE IN SEXUALLY TRANSMITTED DISEASES. Location TBA. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Obstetrics and Gynecology

Nov 3-7, 1987
CONTEMPORARY ISSUES AND PRACTICES IN OB/GYN. Dallas. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Surgery

Nov 4-7, 1987
2ND INTERNATIONAL CONGRESS ON CYCLOSPORINE. Washington, DC. Contact Alice Reardon, Continuing Education Division, G.104 MSB, The University of Texas Medical School, 6431 Fannin, Houston, TX 77030 (713) 792-5346

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

TELECONFERENCE NETWORK OF TEXAS

Oct 17, 1987, Saturday, 10 am to 12 pm
COSMETIC EYELID SURGERY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

CALENDAR OF MEETINGS ■Denotes Texas Meetings

MAY

29TH ANNUAL MEETING FOR BIOCOMMUNICATORS, Norfolk, Va, May 22-27, 1987. L. Elsesser, Executive Director, Health Sciences Communications Association, 6105 Lindell Blvd, St Louis, MO 63112 (314) 725-4722

AMERICAN GERIATRICS SOCIETY ANNUAL MEETING, New Orleans, May 14-17, 1987. Barbara Popecki, AGS, 770 Lexington Ave, Suite 400, New York, NY 10021 (212) 308-1414

AMERICAN SOCIETY FOR NEUROCHEMISTRY/INTERNATIONAL SOCIETY FOR NEUROCHEMISTRY JOINT MEETING, La Guaira, Venezuela, May 31-June 6, 1987. Dr Marion Smith, Department of Neurology, 127-A, Veterans Administration Medical Center, Palo Alto, CA 94304 (415) 493-5000, ext 5567

■G.W.N. EGGERS SOCIETY/UTMB ORTHOPAEDIC ALUMNI 4TH ANNUAL MEETING, Galveston, May 19-21, 1987. Susan Royal, UTMB, Office of Continuing Education, Learning Center, J-34, Galveston, TX 77550-2782 (409) 761-2934

LOUISIANA-MISSISSIPPI OPHTHALMOLOGICAL AND OTOLARYNGOLOGICAL SOCIETY 49TH ANNUAL MEETING, Biloxi, Miss, May 28-30, 1987. Ben Davis, Jr, CAE, Executive Secretary, Louisiana-Mississippi O&O Society, PO Box 12314, Jackson, MS 39211 (601) 956-7787

MASTER APPPROACH TO CARDIOVASCULAR PROBLEMS 15TH ANNUAL CONFERENCE, Lake Buena Vista, Fla, May 30-June 1, 1987. Mrs Y. Barcena, Division of Cardiology, D-39, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 549-7124

■PITUITARY SOCIETY OF HOUSTON MEETING, Houston, May 16, 1987. Floyd Haar, MD, 1213 Hermann Dr, #645, Houston, TX 77004

■RENAL PHYSICIANS OF TEXAS MEETING, Houston, May 15, 1987. Alan Hull, MD, 6010 Forest Park Rd, Dallas, TX 75235

■TEXAS ALLERGY SOCIETY MEETING, Houston, May 16, 1987. A. H. Redman, Jr, MD, 7505 Fannin, Houston, TX 77054

■TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS MEETING, Houston, May 16, 1987. T. Guy Bragg III, MD, 1725 Ed Carey Dr, Harlingen, TX 78550

■TEXAS ASSOCIATION OF OTOLARYNGOLOGY, HEAD AND NECK SURGERY MEETING, Houston, May 15, 1987. Lewis Raney, MD, 6111 Harry Hines Blvd, Dallas, TX 75235

■TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE MEETING, Houston, May 16, 1987. Elizabeth Barber, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS DERMATOLOGICAL SOCIETY MEETING, Houston, May 16, 1987. Edward Spencer, MD, 3403 Loy Lake Rd, Sherman, TX 75090 (214) 892-2126

■TEXAS DIABETES AND ENDOCRINE ASSOCIATION MEETING, Houston, May 15, 1987. John Comstock, MD, 807 Rice, Houston, TX 77096

■**TEXAS MEDICAL ASSOCIATION**, Houston, May 13-17, 1987. Dale Willimack, CAE, 1801 N Lamar Blvd, Austin, TX 78701

■TEXAS NEUROLOGICAL SOCIETY MEETING, Houston, May 15, 1987. Leonard Hershkowitz, MD, 6565 DeMoss, #203, Houston 77074

■TEXAS OCCUPATIONAL MEDICAL ASSOCIATION MEETING, Houston, May 15, 1987. Glen Douglas, MD, PO Box 2451, Houston, TX 77001

■TEXAS OPHTHALMOLOGICAL ASSOCIATION MEETING, Houston, May 15, 1987. Iris Wenzel, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS ORTHOPAEDIC ASSOCIATION MEETING, Houston, May 16, 1987. Elizabeth Barber, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS PEDIATRIC SOCIETY MEETING, Houston, May 16, 1987. Mary Greene, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY MEETING, Houston, May 16, 1987. Salvador Baylan, MD, 12803 Park Forest, San Antonio, TX 78230

■TEXAS SOCIETY OF ANESTHESIOLOGISTS MEETING, Houston, May 16-17, 1987. Joseph Gabel, MD, Dept of Anesthesiology, The University of Texas Medical School, 6431 Fannin, Room 5020, Houston, TX 77030

■TEXAS SOCIETY OF COLON AND RECTAL SURGEONS MEETING, Houston, May 16, 1987. William Barnett, MD, 1003 N Washington, Dallas, TX 75204

■TEXAS SOCIETY OF PATHOLOGISTS MEETING, Houston, May 16, 1987. Iris Wenzel, TMA, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS SOCIETY OF PLASTIC SURGEONS MEETING, Houston, May 15, 1987. Dennis Lynch, MD, 2401 S 31st St, Temple, TX 76508 (817) 774-2321

■TEXAS SOCIETY OF SPORTS MEDICINE, Houston, May 16, 1987. Thomas Clanton, MD, 6410 Fannin, Suite 310, Houston, TX 77030

JUNE

AMERICAN CANCER SOCIETY 2ND NATIONAL CONFERENCE ON CANCER PREVENTION AND DETECTION, Seattle, June 25-27, 1987. American Cancer Society, 90 Park Avenue, New York, NY 10016

AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING, Chicago, June 21-25, 1987. Felix Niespodziewanski, 535 N Dearborn St, Chicago, IL 60610 (312) 645-4597

AMERICAN MEDICAL STAFF SECTION 9TH ASSEMBLY, Chicago, June 18-22, 1987. AMA, Dept of Hospital Medical Staff Services, 535 N Dearborn St, Chicago, IL 60610 (312) 645-4747

JULY

■TEXAS SOCIETY FOR RESPIRATORY THERAPY ANNUAL MEETING, Houston, July 14-19, 1987. Mike Marks, 506 W 12th St, Austin, TX 78701 (512) 479-0425

He walked away a different person.

Diagnosis: Traumatic Brain Injury

He looks quite normal. But he sees life quite differently. He suffered a traumatic brain injury and simply doesn't recognize what is socially acceptable behavior and what isn't. Mentally he's a different person.

For him to have any hope of returning to his family and community, he requires a highly structured form of therapy. At Warm Springs Rehabilitation Hospital, he has the benefit of a traumatic brain injury program that includes speech, occupational and physical therapies along with therapeutic recreation, psychological counseling and social services. His daily routine is tightly controlled every hour of every day of every week.

Obviously, not every traumatic brain injury is exactly like this one. Warm Springs, with over 40 years of rehabilitation experience, has a traumatic brain injury team that customizes each program to meet the individual needs of each patient. The goal of every program is to help the patient put his or her life back into order and to become an active member of society once again.

If you have a patient that has suffered a traumatic brain injury, contact Dr. Larry Browne and discuss the merits of our rehabilitation program.

WARM SPRINGS REHABILITATION HOSPITAL

P.O. Box 58 • Gonzales, Texas 78629
1-800-292-1440

SCOTT&WHITE

Texas A&M University
College of Medicine

To Friends of Scott and White

You are invited to renew old acquaintances and meet new friends at the

Scott and White Alumni Association Reception

during the

TEXAS MEDICAL ASSOCIATION ANNUAL SESSION

6-8 p.m. in
Sandalwood A & B Rooms
at Hyatt Regency, Houston

Friday, May 15, 1987

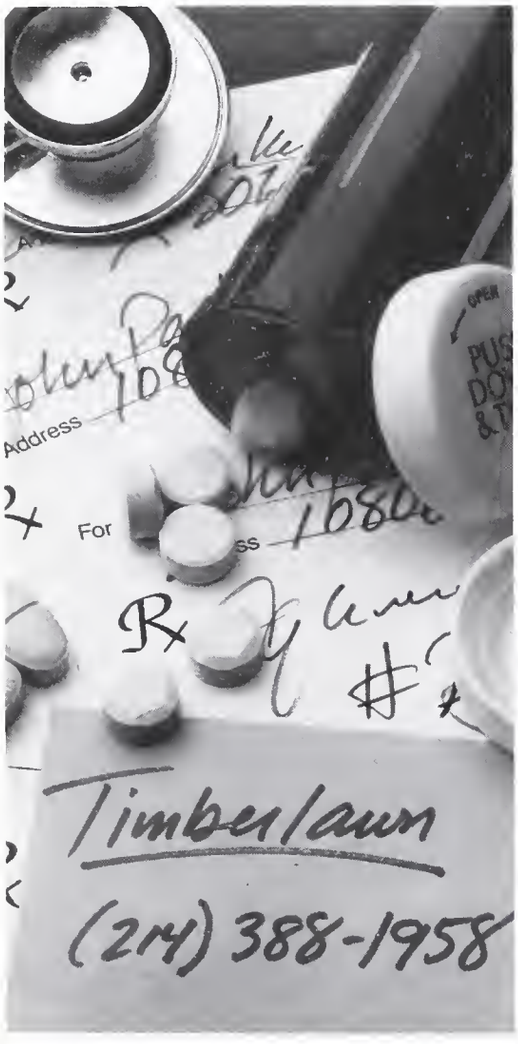
We look forward to seeing you there!

A National Symposium

MENOPAUSE: CONSEQUENCES AND TREATMENT STRATEGIES

South Padre Island, Hilton Resort
South Padre Island, Texas
June 17-20, 1987

For more information or to register contact: Office of Continuing Medical Education, Scott and White, Temple, Texas 76508, (817) 774-4073.



If the problem's close to home, now help is, too.

In today's medical community, the problem of substance abuse can strike very close to home. Indeed, physicians themselves are sometimes impaired by drug or alcohol abuse.

But professional treatment for health professionals is available. And now it's offered here in the south central U.S. by one of the nation's most respected private psychiatric hospitals, Timberlawn of Dallas.

The Timberlawn in-patient program for impaired health care professionals features:

Individual evaluation
Multi-disciplinary treatment
Family counseling
Peer support groups
Aftercare and monitoring services
Voluntary community service component

For more information contact:
Edgar P. Nace, M.D., Chief of Substance Abuse Services

Timberlawn

Psychiatric Hospital

P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958

JUNE 1987

Texas Medicine

39 Teach the parents well

43 Reoperation for failed myocardial revascularization

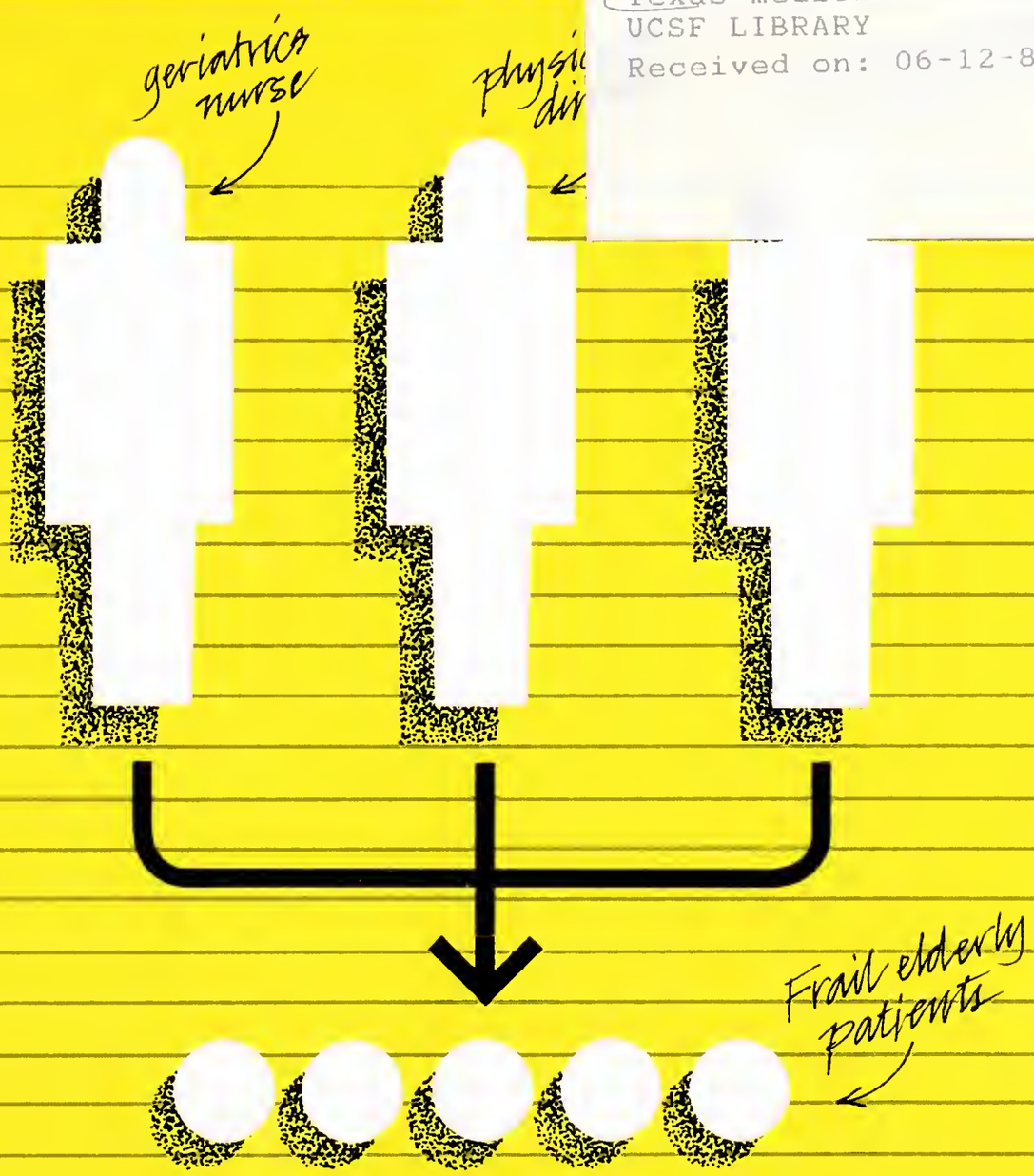
54 Elevated blood lead levels in adults

60 Adjuvant pain treatment in cancer: Psychopharmacology

27 Geriatric evaluation program in a private hospital

URRENT
REA

Texas medicine
UCSF LIBRARY
Received on: 06-12-87



THE LIBRARY
ACQUISITIONS DIV.-SERIALS
UNIV. OF CALIF-SAN FRANCISCO
SAN FRANCISCO CA 94143

****

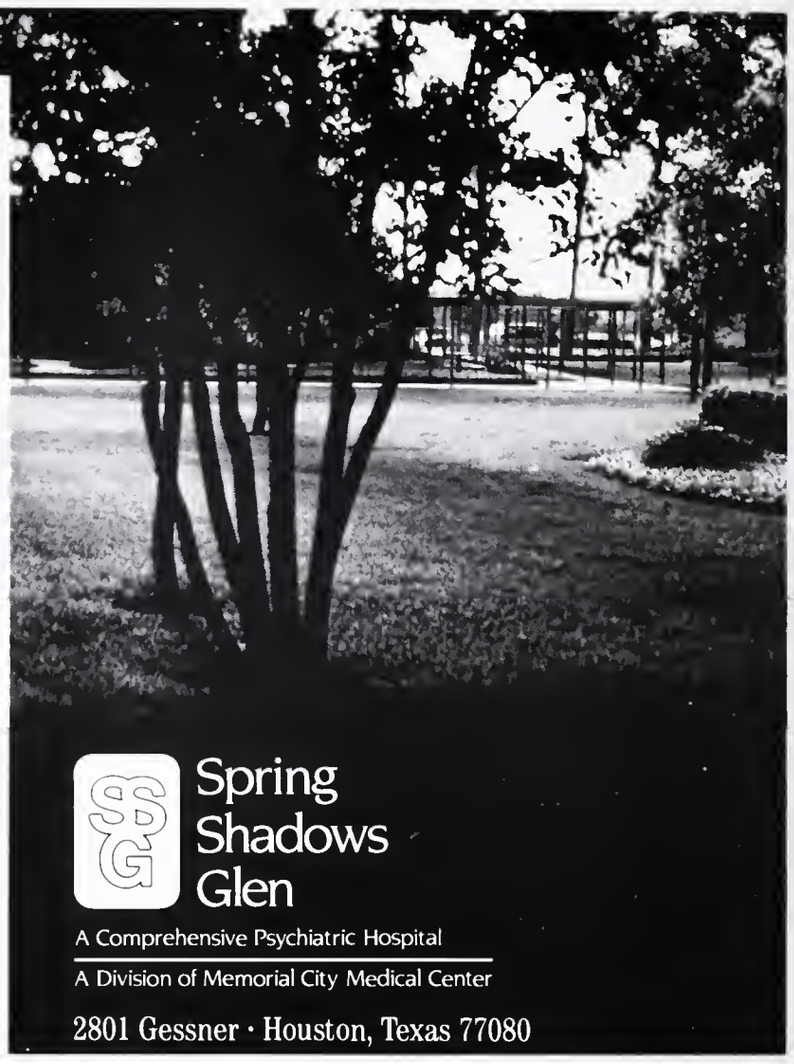
Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

Robert L. Stubblefield, M.D., Medical Director

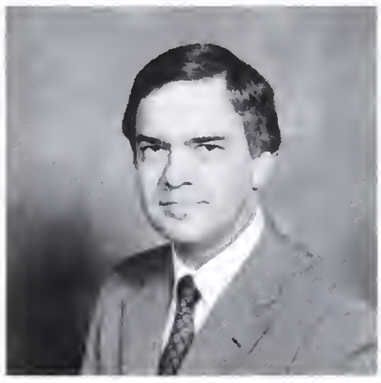


Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080



MICHAEL R. SHARP ATTORNEY

REPRESENTATION IN MATTERS OF PROFESSIONAL LICENSURE BEFORE THE TEXAS STATE BOARD OF MEDICAL EXAMINERS

SHARP, TACKETT & DAVIDSON,
A PROFESSIONAL CORPORATION
1680 One American Center • Austin, Texas 78701 • (512) 473-2265

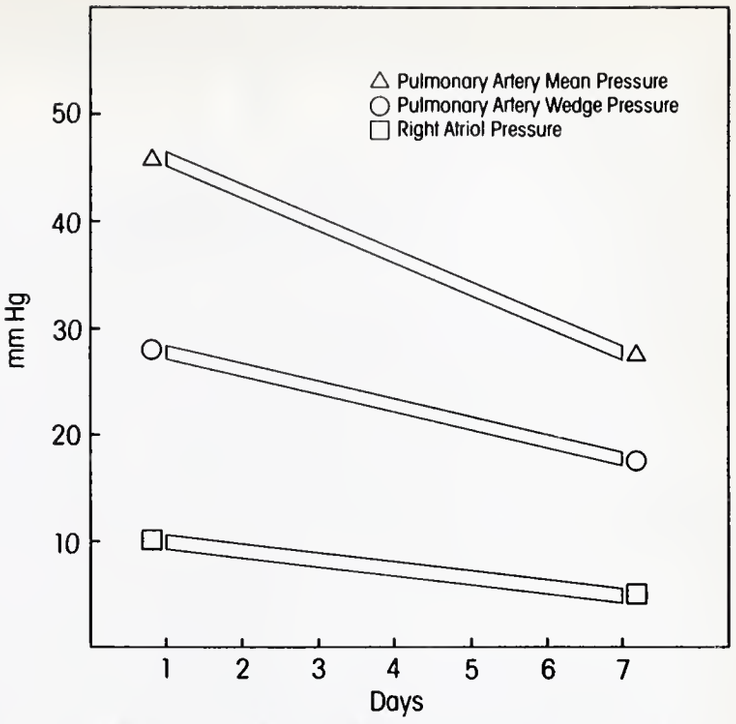
Not certified by the Texas Board of Legal Specialization.
Certification is not currently available to anyone in this legal area.

Bumex®
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml
and 10-ml vials (0.25 mg/ml)

REDUCES FLUID OVERLOAD and eases the burden on the failing heart

Significantly improves hemodynamics



Ten patients with CHF showed marked hemodynamic improvement after seven days of BUMEX®(bumetanide/Roche) (mean values ± SE). Adapted from Olesen, *et al*.[1]

References: **1.** Olesen KH, *et al*: *Postgrad Med J 51*(Suppl 6):54-63, 1975. **2.** Handler B, Dhingra RC, Rosen KM: *J Clin Pharmacol 21*:706-711, Nov-Dec 1981. **3.** Brater DC, *et al*: *Clin Pharmacol Ther 34*:207-213, Aug 1983. **4.** Brater DC, Fox WR, Chennavasin P: *J Clin Pharmacol 21*:599-603, Nov-Dec 1981. **5.** Davies DL, *et al*: *Clin Pharmacol Ther 15*:141-155, Feb 1974.

BUMEX®
bumetanide/Roche
0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

BUMEX® (bumetanide/Roche)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome.
Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.
Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.
CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.
WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels.
Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.
Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use: Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asthenia, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.
HOW SUPPLIED: *Tablets*, 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500; Prescription Paks of 30, Tel-E-Dose® cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5; 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.
Ampuls, 2 ml, 0.25 mg/ml, boxes of ten.
Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

ROCHE®
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

ROCHE®

OVERLOAD

Reduce fluid volume and improve hemodynamics in CHF

Edema due to congestive heart failure often demands highly effective diuresis to reduce the fluid load on the failing heart. Bumex® (bumetanide/Roche) is the next generation in loop diuretic therapy for three powerful reasons. It moves out an unsurpassed volume of fluid and sodium, resulting in significant reductions in edema and right atrial and pulmonary artery wedge pressures.[1,2] It's almost completely absorbed through the GI tract, so it's easy to titrate.[3] And Bumex completes high-volume diuresis fast—within four hours at usual doses.[4,5] Your patients spend less time in diuresis, more time in normal activities.

Bumex has a good safety profile; however, as with all loop diuretics, Bumex, if given in excessive amounts, can lead to profound diuresis with water and electrolyte depletion, including hypokalemia. Serum electrolytes should be monitored periodically, especially in patients on low salt diets or those treated for prolonged periods or on high doses.

Bumex®
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets, 2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml).

First line loop diuretic therapy

Please see references and summary of product information on preceding page.

Copyright © 1986 by Hoffmann-La Roche Inc. All rights reserved.

Texas Medicine

VOLUME 83 JUNE 1987

Contents

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

Harold R. High, MD, Cuero
Secretary

Merle W. Delmer, MD, San Antonio
James M. Graham, MD, Austin
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

Jim Bob Brame, MD, Eldorado
President

Nancy W. Dickey, MD, Richmond
Vice President

David Vanderpool, MD, Dallas
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Margie B. Peschel, MD, Fort Worth
Secretary

Robert G. Mickey, Austin
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd. Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Shari Henson, Production Manager/
Editorial Assistant
Patty Illich, Administrative Secretary/
Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
L. Maximilian Buja, MD, Dallas
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates, plus 7.25% state sales tax for Texas subscribers only, are: Members, $16 per year plus $1.16 sales tax; nonmembers and institutions, $20 per year plus $1.45 sales tax; foreign, $24 US currency; single copy, $2 plus $.15 sales tax.

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701.

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701.

ARTICLES

27 Geriatric evaluation program in a private hospital: implications for health care planning
Henry B. Kirby, MD; Michele Haber-Scharf, MSSW, MPH; Judith Baer, ACSW; Serena Pickman, RN

39 A comprehensive program of parent education and its evaluation
Vymutt J. Gururaj, MD; Diane E. Karther, MS

43 Reoperation for failed myocardial revascularization procedures
Donald L. Bricker, MD; D. Vincent Rittmann, Jr, MD

49 Prestige ratings of allied health professions
Harry J. Parker, PhD; Fong Chan, PhD

54 Elevated blood lead levels in adults: a reportable occupational disease in Texas
Jeanne Martin, PhD; Patricia A. Honchar, PhD; Charles E. Alexander, MD, DrPH

60 Cancer update: Adjuvant pain treatment in cancer: a case for psychopharmacology
Francisco Fernandez, MD; Frank Adams, MD; Valerie F. Holmes, MD; Joel K. Levy, PhD

EDITORIALS

6 The physician and patient education
D. M. Foulds, MD

7 Occupational disease reporting in Texas
Marcus M. Key, MD, MIH

FEATURE

68 Dr Vanderpool: A president on the run

MEDICINE AND THE LAW

75 The indigent patient—yours, mine, ours?
C. J. Francisco, JD

NEWS

TMA in action
9 19 delegates to represent Texas at AMA meeting June 21–25
9 Service helps improve access to quality care in Texas
9 InterFirst offers TMA members special line of credit
9 Tapes replay presentations exploring underutilization

Health line
10 AMA offers guidelines for HIV antibody testing
13 Koop discusses AIDS before joint legislative session
13 National diabetes study opens hotline for volunteers
14 Committee studies AIDS, health care agencies

Socioeconomics
14 Board warns physicians of unauthorized liability insurer
14 Commission issues report on physician payments

Capital comments
15 TMA supports mammograms to screen for breast cancer

15 Newsmakers

DEPARTMENTS

66 Clinical abstracts
78 Deaths
80 Information for authors
83 Medicine in literature
97 Continuing education directory

ON THE COVER

The cover article, "Geriatric evaluation program in a private hospital: implications for health care planning," describes 108 hospital admissions from the community into a non-geographical multidisciplinary geriatric program. Written by Henry B. Kirby, MD; Michele Haber-Scharf, MSSW, MPH; Judith Baer, ACSW; and Serena Pickman, RN, the article begins on page 27.

COMING NEXT MONTH

Scheduled for the July issue of *Texas Medicine* are articles on malignant central nervous system tumors in children, techniques for the elimination of upper tract urinary stones, unusual presentation of fibrous dysplasia, and an analysis of the JAMA obituaries.

American Physicians Insurance Exchange

MALPRACTICE

It's an allegation that can happen to anyone.

You don't have to stand alone!

We wrote the book on malpractice insurance. We started writing professional liability insurance over 12 years ago, when the other insurance companies were looking for a way out.

Why? Because we're 100% owned and controlled by dentists and physicians. We know you can't operate your practice without malpractice insurance.

We know a good insurance company must insure *all* specialties. And we have never settled a claim without an insured's written consent. We believe that you shouldn't have to stand alone. If you're concerned about your insurance company's commitment to you, give us a call today.

1301 Capital of Texas Highway, Suite #B-300
Austin, Texas 78746
(512) 328-1520

Nationwide 1-800-252-3628

In San Antonio:
Bill Sweet
(512) 497-3205

PSYCHIATRISTS

MEDICAL DIRECTORS
UNIT CHIEFS

We are the nation's leading mental health care provider—Psychiatric Institutes of America (PIA).

PIA's continuing growth has created excellent career opportunities for Adult, Adolescent and Child Psychiatrists. Ideal situations in which you can grow professionally without sacrificing the freedom you enjoy in a practice of your own:

- Independent, private practice model.
- Member of a prestigious hospital, many with university and research affiliations.
- Innovative marketing assistance and referral development.
- State-of-the-art, specialized hospital programs.

Due to recent expansion in Texas, PIA has immediate opportunities available:

WAXAHACHIE, TX
(Opens August 1987)
- Medical Director
- Unit Chief—Adult
- Unit Chief—Adolescent

DALLAS, TX
- Unit Chief—Adult
- Unit Chief—Adolescent

CORPUS CHRISTI, TX
- Medical Director

DENTON, TX
(Opens November 1987)
- Unit Chief—Adolescent
- Unit Chief—Substance Abuse

SAN ANTONIO, TX
- Unit Chief—Adult
- Unit Chief—Adolescent

THE WOODLANDS, TX
- Unit Chiefs—Child/Adolescent

For more information, send your curriculum vitae, in confidence, to Steve Sams, Assistant Vice President, Physician Services or call toll-free 1-800-435-4426 or (202) 337-5600.

PIA

Psychiatric Institutes of America
Part of the NME Specialty Hospital Group
1010 Wisconsin Avenue, NW, Suite 900
Washington, DC 20007

An Equal Opportunity Employer

The physician and patient education

Traditional patient education consists of providing information to a patient or parents. It is assumed that if the individual knows the facts, the medicine will be taken properly, the diet followed, the seat belt put on, discipline will be appropriate, medications will be put in a safe place, and he or she will stop smoking. The failure of traditional education programs documented in the literature attests to the inadequacy of this assumption.

Green has defined health education as "any combination of learning experiences designed to facilitate voluntary adaptations of behavior conducive to health" (1). Haggerty has also concluded that reliance on passive information transfer alone is likely to be unsuccessful and that a multifaceted educational program is more likely to be successful (2).

In recent years, the principles of social learning theory (3) which, in a narrower sense, used to be termed "behavior modification," have been applied effectively to patient education (4,5). This theory considers behavior, environment, and patient knowledge as a constant interaction rather than one being determined by the other. A change in any one of these will have implications on the others. In this model, new patterns of behavior are developed by the acquisition of information and reinforcement of appropriate behaviors. The reinforcement may be direct or may be indirect by observing someone else being reinforced for the behavior. Alternatively, a system of self-monitoring and self-reward may be established. A number of techniques, used singly or in combination, have been shown to be effective in producing changes in behavior. The observation of others performing the desired behavior, or modeling, is one technique. This provides knowledge of what to do as well as an example of how to do it. This is frequently accomplished by videotape demonstration and/or role playing. Another technique provides a means for the individual to practice the desired behavior. During the practice times, feedback is provided to reinforce appropriate behavior and correct inappropriate behavior. A written contract has also been used to influence behavior change. This contract should specify the behaviors to be performed, a goal for successful performance, and a reward for successful performance. The individual may be asked to keep track of his or her own behaviors or the health educator or family member might be responsible for monitoring the behavior.

What can the practicing physician do? The conflicting evidence about effectiveness of patient education doesn't mean the physician should not try. It does mean that new methods must be used. The practicing physician is in an ideal position to employ social learning principles in the office. Information can be provided by a variety of means including videotapes, printed handouts, and computer interactive programs. Talking to church, school, and other organizations may also be helpful. In order to make more effective use of office time, group well-child care has been shown to be an effective way of providing information (6). Reinforcement of appropriate behavior during the office visit should increase the chances for success. The physician can also have an effect on the political system to accomplish behavioral change. Feldman was successful in getting the city of Seattle to require that the temperature on hot water heaters be lowered by meter readers, which resulted in a significant decrease in scald injuries in children (7). Sanders played a major role in the passage of the legislation mandating the use of child restraining devices in Tennessee in 1978 (8). Since that time, all 50 states have passed similar laws. Physicians and dentists have been influential in getting fluoridation laws passed in their communities (9).

Research in the area of patient education should involve carefully designed studies in which the measured result is a change in behavior rather than increased knowledge or changed attitudes. In addition, adequate controls with validated measurement instruments must be used.

Patients desire health education. Dr Spock's book on child health care has sold more copies of any book other than the Bible. The physician—healer, teacher, and counselor—is in an ideal position to provide health education, but new methods and techniques will be required to change behavior. Not everyone will do it well.

D. M. FOULDS, MD
Department of Pediatrics, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284–7808.

REFERENCES

1. Green LW, Kreuter MW, Deeds SG, et al: Health education planning. A diagnostic approach. Palo Alto, Calif, Mayfield Publishing Co, 1980.
2. Haggerty RJ: Changing lifestyles to improve health. Prev Med 6(2):276–289, 1977.
3. Parcel GS, Baranowski T: Social learning theory and health education. Health Educ (Wash) 12(3):14–18, 1981.
4. Allen DB, Bergman AB: Social learning approaches to health education: utilization of infant auto restraint devices. Pediatrics 58(3):323–328, 1976.
5. Martens LV, Frazier PJ, Hirt KJ, et al: Developing brushing performance in second graders through behavior modification. Health Serv Rep 88(9):818–823, 1973.
6. Osborn LM: Group well-child care. Clin Perinatol 12(2): 355–365, 1985.
7. Feldman KW: Controlling scald burns, in Bergman AB (ed): Preventing Childhood Injuries. Report of the Twelfth Ross Roundtable on Critical Approaches to Common Pediatric Problems. Columbus, Ohio, Ross Laboratories, 1982, pp 50–54.
8. Sanders RS: Legislative approach to auto safety: the Tennessee experience, in Bergman AB (ed): Preventing Childhood Injuries. Report of the Twelfth Ross Roundtable on Critical Approaches to Common Pediatric Problems. Columbus, Ohio, Ross Laboratories, 1982, pp 39–43.
9. Margolis FJ, Cohen SN: Successful and unsuccessful experiences in combating the antifluoridationists. Pediatrics 76(1):113–118, 1985.

Occupational disease reporting in Texas

With the passage in 1985 of the Texas Occupational Disease Reporting Act, (Texas Civil Statutes, Article 5182C) Texas joined a number of other states in recognizing the importance of linking diagnosed and suspected cases of occupational illness with the state's public health system and its focus on disease prevention. This law is modeled after the well-established system of communicable disease reporting that for many years has been instrumental in the recognition, surveillance, follow-up, and control of infectious diseases in Texas as well as the rest of the nation.

The four occupational conditions reportable at this time in Texas are blood lead levels greater than or equal to 40 μg/dL (1.93 μmol/L) in persons 15 years of age or older, silicosis, acute occupational pesticide poisoning, and asbestosis. The knowledge and technology are available to prevent all of these conditions through control of the etiologic agents at the worksite. As with reports of communicable diseases, a case report of any one of these occupational diseases should provoke the question of why this case of preventable illness has occurred.

The Texas Occupational Disease Reporting Act assigns responsibility to the Texas Department of Health for evaluating case reports, establishing trends in the occurrence of occupational disease in Texas, and investigating the causes and associated hazards, with prevention of additional cases as the ultimate goal. The law also gives rule-making authority to the Texas Board of Health to add to the list of reportable diseases as long as the addition is another preventable, occupational disease of well-understood etiology.

Contained in this issue of *Texas Medicine* is an article reviewing the biological effects and sources of occupational lead exposure and the rationale for reporting of adult elevated blood lead cases to the Texas Department of Health. (Similar reviews of the additional reportable occupational diseases are in preparation.) The article is a valuable reference for physicians who may encounter the sometimes puzzling task of diagnosing the effects of occupational lead exposure.

MARCUS M. KEY, MD, MIH
Professor of Occupational Medicine, The University of Texas School of Public Health, PO Box 20186, Houston, TX 77225.

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

READ IT AND REAP!

Cost per $1000 monthly benefit
TEXAS MEDICAL ASSOCIATION
Long Term Disability Insurance

WHAT YOU PAY . . . based on a 30 day waiting period.

Your Age:	Monthly Cost*	Average monthly cost based on your present age for continuous coverage to age 70:
Less than age 30	$ 6.33	$28.79
30–39	7.33	32.00
40–44	14.83	36.11
45–49	21.83	40.37
50–54	30.67	45.00
55–59	47.33	49.78
60–64	52.17	51.00
65 & Over	49.83	49.83

*Payments are made on a quarterly basis. Costs are based on current rates.

WHAT YOU GET . . . at no additional cost:

- ✓ Bonafide long-term benefits for total disability to age 70—through the critical years.
- ✓ Long term benefits for partial disability.
- ✓ Definition of disability protects you at your medical specialty—all ages.
- ✓ Up to $8000 monthly benefits regardless of other disability insurance you may have.
- ✓ Claim payments are not reduced by monies you may receive from other disability policies, salary continuation, investments, Social Security.
- ✓ During partial disability, pre-disability earnings are automatically increased by 6 percent annually to guard against erosion of amounts payable.
- ✓ Your waiting period for partial disability is the same as you select for total disability.
- ✓ Survivor Benefit.

WHAT YOU DO NOT GET . . .

- ∅ Costly frills
- ∅ Termination at 65—during the critical years
- ∅ Lesser benefit period after age 60 (See example, page 10, TMA brochure)

OPTIONAL COVERAGES . . .

- ✓ Cost of Living Guardian
- ✓ In-hospital Disability Income

If you do not have a TMA Insurance Brochure dated August, 1986
Call 1-800-252-9318

Texas Medical Association
INSURANCE PROGRAM
1901 North Lamar Blvd, Austin, TX 78705
underwritten by
PRUCO Life Insurance Company of Texas
a subsidiary of the Prudential

News

TMA IN ACTION

19 delegates to represent Texas at AMA meeting June 21–25

The American Medical Association's House of Delegates convenes at 2 pm, Sunday, June 21, in the International Ballroom of the Chicago Hilton and Towers Hotel. A delegation of 19 physicians will represent Texas Medical Association during the meeting, which continues through Thursday, June 25.

At press time, TMA's House of Delegates was scheduled to consider five resolutions for possible presentation at the AMA meeting. Bexar County Medical Society wrote two of the resolutions. The first requests that TMA and the AMA support a requirement that an organization offering health coverage must offer private insurance in addition to other coverages that normally would be offered. The second resolution asks that TMA and the AMA urge appropriate hospital organizations to discontinue television advertising, excluding public service announcements and educational programming, in hopes of lowering the cost of patient care.

A third resolution comes from Hidalgo-Starr County Medical Society. It notes that intrusions from the federal government are eroding physicians' professional freedom, destroying their morale, and discouraging would-be physicians. The resolution asks that the TMA and AMA endorse this statement as policy.

TMA's House of Delegates also was to consider a resolution opposing the inclusion of inpatient services for radiologists, anesthesiologists, and pathologists in Medicare hospital diagnosis related groups (DRGs), as proposed by the federal Office of Management and Budget. The Midland County Medical Society authored the resolution.

The fifth resolution under consideration at press time came from the Kerr-Kendall-Gillespie-Bandera County Medical Society, which requested the repeal of Section 9332(d) of the Omnibus Budget Reconciliation Act of 1986 (PL 99–509). The section, which would go into effect Oct 1, 1987, requires disclosure of the amount a patient would owe a physician who does not accept assignment for an elective surgical procedure that costs more than $500 in physicians' fees.

The Texas Delegation to the AMA is the fourth largest medical society delegation in the 406-member AMA House of Delegates. Representing TMA are George G. Alexander, MD, Houston; Val F. Borum, MD, Fort Worth; Dick K. Cason, MD, Hillsboro; Jack T. Chisolm, MD, Dallas; Milton V. Davis, MD, Dallas; Merle W. Delmer, MD, San Antonio; Mylie E. Durham, MD, Houston; Ted H. Forsythe, MD, Lubbock; Hugh Lamensdorf, MD, Fort Worth; S. Braswell Locker, MD, Brooksmith; Haden E. McKay, MD, Humble; R.A.D. Morton, Jr, MD, El Paso; Sam A. Nixon, MD, Houston; James K. Peden, MD, Dallas; John R. Rainey, Jr, MD, Austin; Mario E. Ramirez, MD, Rio Grande City; L. Rodney Rodgers, MD, Houston; John M. Smith, Jr, MD, San Antonio; and Stanley E. Thompson, MD, Richmond.

Three members of the delegation will serve on reference committees during the annual meeting: Dr Alexander will serve on Reference Committee B (Legislation); Dr Smith will serve on Reference Committee F (Board of Trustees); and Dr Durham will chair Reference Committee I (Health Policy Agenda).

Service helps improve access to quality care in Texas

Texas Medical Association's Physicians Placement Service, available at no charge to association members, helps improve access to quality health care in all areas of Texas. The service is a clearinghouse for (1) physicians seeking to relocate and (2) hospitals, clinics, physicians, and community contacts desiring to recruit physicians. The placement service also publishes and cross circulates three bimonthly bulletins that bring together practice opportunities and physicians: "Opportunities for Practice in Texas," "Physicians Seeking Locations in Texas—Physicians *With* a Current Texas License," and "Physicians Seeking Locations in Texas—Physicians *Without* a Current Texas License."

At press time, Texas Medical Association's Physicians Placement Service listed 227 practice opportunities and 117 physicians seeking a practice. With 90 listings, family practice offered the largest number of opportunities in one specialty. Family practice physicians seeking opportunities numbered 28, also the largest grouping.

Nonmembers may subscribe to the service for a $50 annual fee (a higher fee applies to bulletins mailed to a foreign address). Further information is available from Texas Medical Association, Physicians Placement Service, 1801 N Lamar, Austin, TX 78701, phone (512)477–6704.

InterFirst offers TMA members special line of credit

As a new member service, InterFirst Bank Dallas offers Texas Medical Association members a special line of credit for up to $98,000. In addition to convenient, readily accessible credit, the bank allows TMA members a preferred annual percentage rate (variable quarterly), currently 12%; no fees to open or maintain an account; a low 3% monthly payback (or $35, whichever is greater); and complimentary checks to activate the credit line.

Interfirst suggests that association members may wish to use the line of credit to pay off loans or credit card accounts that charge up to 21% APR. The credit also is convenient for travel, auto repairs, emergency money, or other personal needs.

Further information and applications are available from Texas Medical Association, Membership Department, 1801 N Lamar Blvd, Austin, TX 78701, phone (512) 477-6704.

Tapes replay presentations exploring underutilization

Audiocassette tapes of presentations at the most recent meeting of Texas Medical Association's Hospital Medical Staff Section replay presentations that explore the ramifications of "Underutilization in the Delivery of Health Care Services." The tapes are available for purchase from the association headquarters.

Presented May 16–17, 1987, in conjunction with TMA's annual session in Houston, the meeting program featured representatives of the American Medical

Association, American Association of Retired Persons, Joint Commission on Accreditation of Hospitals, and Texas Medical Foundation. There also were discussions of "Preserving Revenue through Appropriate Coding and Billing Techniques and the Impact of SOBRA and the Medicare MAAC" and "Consent for Treatment."

Further information on ordering the tapes is available from the Texas Medical Association, Department of Health Care Delivery, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477-6704, ext 260.

HEALTH LINE

AMA offers guidelines for HIV antibody testing

The American Medical Association has offered preliminary guidelines for counseling patients who received blood products or transfusions between 1978 and late spring, 1985. The guidelines follow an advisory from the Centers for Disease Control suggesting that such patients seek the counsel of their physicians regarding the advisability of HIV antibody testing.

The association answers the following questions:

How should you determine a patient's risk of HIV exposure?

For most patients seeking advice, the risk of exposure to HIV from a single transfusion is extremely small, less than 1 in 10,000. The risk increases with multiple blood transfusions, receipt of blood collected from donors living in an area with a high incidence of AIDS (New York/Northern New Jersey, Los Angeles, San Francisco, Miami, and Houston), and the presence of clinical or laboratory indications of immune deficiency. Hemophiliacs and others who have received a large number of blood products over extended periods are at the highest risk of HIV seropositivity. A detailed history of potential blood exposures, review of symptoms possibly related to immune suppression (eg, severe weight loss or diarrhea, unexplained fever or lymphadenopathy, extreme fatigue, confusion), and a physical examination will allow you to assess the risk of exposure.

Who should be advised to have HIV antibody testing at this time?

Only a small proportion of the estimated 30 to 60 million persons who received blood or blood products between 1978 and mid-1985 need HIV antibody testing at this time. Many of those at highest risk of exposure, such as hemophiliacs and blood transfusion-dependent persons, already have been tested and are being followed through their treatment programs. In addition to those with hemophilia and symptoms of immune suppression, patients who should be considered for testing include: (1) persons who received blood products collected from areas with a high incidence of AIDS; (2) persons in the previous categories who have been sexually active since receiving the transfusion; and (3) persons with substantial anxiety about the possibility of HIV infection despite reassurances. All individuals testing positive need to be advised about the importance of "safer sex" practices and of referring sexual partners for HIV counseling and possible testing.

Where can the test be performed and what special conditions apply?

The test is generally available at alternate test sites (the locations of which are available from health departments), private laboratories, Red Cross facilities, some hospitals, and blood donation centers. In most states, alternate test sites offer anonymous and free or low-cost testing.

Prior to testing, patients need to be counseled regarding the possibility of false positive or negative test results, the inability to predict development of AIDS from HIV antibody positivity alone, and the possible loss of insurance or employment if a positive test result is revealed to their insurer or employer. Under no circumstances should the test be performed without the patient's knowledge and informed consent.

Positive ELISA tests should be confirmed by Western Blot or other secondary testing method. Most ELISA positive/Western Blot negative samples are true false positives. If test results are equivocal, a second blood sample should be drawn for retesting. Since it may take up to six months for detectable IgG antibody levels to develop, recent sexual partners with initial seronegative results may require retesting.

How should HIV seropositive individuals be counseled?

Those with seropositive results should assume that they are infected with HIV and may be infectious to sexual partners. The use of condoms during intercourse will decrease, but not eliminate, the risk to sexual partners. A seropositive woman who wishes to become pregnant should understand that there is a high probability that the infant will be exposed to the virus *in utero* or at the time of delivery. The risk of exposure to family members, co-workers, and acquaintances through nonintimate contact appears nonexistent. Seropositive individuals should warn persons who may come in contact with their blood (doctors, dentists, phlebotomists) of the need for infection control precautions.

They should avoid sharing razors or other instruments that may be contaminated with blood, and they should not donate blood or body organs.

The risk of developing AIDS or ARC is determined by the degree of immune suppression, which is best determined by periodic complete blood counts and T-helper lymphocyte subset enumeration, if available. Little is known about the role of lifestyle cofactors in affecting the likelihood of developing severe immunodeficiency, but it is prudent to advise avoidance of infection, good nutrition, adequate rest, and psychological support services for the patient and his/her family. In many communities, AIDS support service organizations have specific counseling and support programs for HIV-seropositive individuals. Overall, it is most beneficial to encourage an optimistic attitude about the future and the individual's ability to lead an active and productive life. A calm and supportive approach will strongly influence your patients. However, if signs of severe depression, suicidal ideation, or obsessive preoccupation with the threat of AIDS is present, referral for psychiatric evaluation and treatment is recommended.

How should you reduce your patient's fears about AIDS and HIV infection?

Although some patients will respond to a negative test result with relief, others will continue to experience se-

Un-switch-ables

Patients and physicians alike prefer

Transderm-Nitro®
nitroglycerin

Over half a billion* patches prescribed in the U.S. since 1982

The only patch with a rate-limiting membrane

Familiar, distinctive tan color and unique shape recognized by patients everywhere

There's no substitute for experience

C I B A

(See Brief Summary of Prescribing Information on the next page.)

*Data on file, CIBA Pharmaceutical Co.

629-7750-A

Transderm-Nitro®
nitroglycerin
Transdermal Therapeutic System

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE INSERT)

INDICATIONS AND USAGE
This drug product has been conditionally approved by the FDA for the prevention and treatment of angina pectoris due to coronary artery disease. The conditional approval reflects a determination that the drug may be marketed while further investigation of its effectiveness is undertaken. A final evaluation of the effectiveness of the product will be announced by the FDA.

CONTRAINDICATIONS
Intolerance of organic nitrate drugs, marked anemia, increased intraocular pressure or increased intracranial pressure.

WARNINGS
In patients with acute myocardial infarction or congestive heart failure, Transderm-Nitro system should be used under careful clinical and/or hemodynamic monitoring.
In terminating treatment of anginal patients, both the dosage and frequency of application must be gradually reduced over a period of 4 to 6 weeks to prevent sudden withdrawal reactions, which are characteristic of all vasodilators in the nitroglycerin class.
Transdermal nitroglycerin systems should be removed before attempting defibrillation or cardioversion because of the potential for altered electrical conductivity which may enhance the possibility of arcing, a phenomenon associated with the use of defibrillators.

PRECAUTIONS
Symptoms of hypotension, such as faintness, weakness or dizziness, particularly orthostatic hypotension may be due to overdosage. When these symptoms occur, the dosage should be reduced or use of the product discontinued.
Transderm-Nitro system is not intended for immediate relief of anginal attacks. For this purpose occasional use of the sublingual preparations may be necessary.

ADVERSE REACTIONS
Transient headaches are the most common side effect, especially when higher doses of the drug are used. These headaches should be treated with mild analgesics while Transderm-Nitro therapy is continued. When such headaches are unresponsive to treatment, the nitroglycerin dosage should be reduced or use of the product discontinued.
Adverse reactions reported less frequently include hypotension, increased heart rate, faintness, flushing, dizziness, nausea and vomiting. These symptoms are attributable to the known pharmacologic effects of nitroglycerin, but may be symptoms of overdosage. When they persist the dose should be reduced or use of the product discontinued. In some patients, dermatitis may occur.

DOSAGE AND ADMINISTRATION
Therapy should be initiated with application of one Transderm-Nitro 5 system to the desired area of skin. Many patients prefer the chest; if hair is likely to interfere with system adhesion or removal, it can be clipped prior to placement of the system. Each system is designed to remain in place for 24 hours, and each successive application should be to a different skin area. Transderm-Nitro system should not be applied to the distal parts of the extremities.
The usual dosage is one Transderm-Nitro 5 system every 24 hours Some patients, however, may require the Transderm-Nitro 10 system. If a single Transderm-Nitro 5 system fails to provide adequate clinical response, the patient should be instructed to remove it and apply either two Transderm-Nitro 5 systems or one Transderm-Nitro 10 system. More systems may be added as indicated by continued careful monitoring of clinical response. The Transderm-Nitro 2.5 system is useful principally for decreasing the dosage gradually, though it may provide adequate therapy for some patients when used alone.
The optimal dosage should be selected based upon the clinical response, side effects, and the effects of therapy upon blood pressure. The greatest attainable decrease in resting blood pressure that is not associated with clinical symptoms of hypotension especially during orthostasis indicates the optimal dosage. To decrease adverse reactions, the size and/or number of systems should be tailored to the individual patient's needs.
Do not store above 86°F (30°C).

PATIENT INSTRUCTIONS FOR APPLICATIONS
A patient leaflet is supplied with the systems.

HOW SUPPLIED

Transderm-Nitro System Rated Release *in vivo*	Total Nitroglycerin in System	System Size	Carton Size
2.5 mg/24 hr	12.5 mg	5 cm^2	30 Systems (NDC 0083-2025-26) *100 Systems (NDC 0083-2025-30)
5 mg/24 hr	25 mg	10 cm^2	30 Systems (NDC 0083-2105-26) *100 Systems (NDC 0083-2105-30)
10 mg/24 hr	50 mg	20 cm^2	30 Systems (NDC 0083-2110-26) *100 Systems (NDC 0083-2110-30)
15 mg/24 hr	75 mg	30 cm^2	30 Systems (NDC 0083-2115-26) *100 Systems (NDC 0083-2115-30)

*Hospital Pack 100's

C85-35 (Rev. 11/85)

Dist. by:
CIBA Pharmaceutical Company
Division of CIBA-GEIGY Corporation
Summit, New Jersey 07901

All transdermal nitroglycerin products are being marketed pending final evaluation of effectiveness by the FDA.

© 1986 CIBA 629-7750-A

C I B A

Happiness is More than Medical Practice.

Happiness is family and loved ones. Leisure hours with friends. Travel. Cheering your alma mater's football team to victory. A burned mortgage on your dream home. Well-educated children. The freedom that comes with financial independence. In fact, financial independence buys most of it.

Whether your life is absorbed in treating patients, caring for a family or preparing for an abundant and enjoyable retirement–or all of these at the same time–Kanaly Trust Company can help.

Financial advisors to physicians and surgeons, we specialize in the coordination of personal and closely held business finance. And we do it without sales commissions and related conflicts of interest. For a happy, enjoyable future, phone or write today.

Kanaly Trust Company
Financial advice in your best interest.
4550 Post Oak Place, Houston, Texas 77027, 713/626-9483

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC
GENERAL MEDICAL

Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas

vere anxiety despite the absence of any laboratory or clinical indication of HIV infection or immunosuppression. Often this is the result of lingering feelings of guilt or shame over having possibly exposed themselves or others to infection, perhaps through an activity unrelated to their receipt of a blood transfusion or blood product. Inquiring about underlying fears and fantasies may help reduce anxiety levels, as will repeated assurances of their health status. Again, if incapacitating anxiety or obsessive ruminations persist despite assurances, mental health service referral is recommended.

Koop discusses AIDS before joint legislative session

The surgeon general of the US Public Health Service warns, "If you don't know what you're doing, or with whom you're doing it, then don't do it." C. Everett Koop, MD, ScD, delivered the advice during a joint session of the Texas legislature, where he appeared as a self-described grim courier with a grim message about acquired immune deficiency syndrome (AIDS). Dr Koop's Austin agenda also included visits with representatives of the Texas Medical Association.

During his presentation at the Capitol Thursday, March 26, 1987, Dr Koop discussed statistics, cost and care issues, and education. He concluded by urging legislators to support programs to combat the syndrome.

Dr Koop began his presentation by praising the Texas Commissioner of Health's Task Force on AIDS and noting, "I think this state is in very good hands indeed."

He said that Texans account for 2,000 of the 33,000 AIDS cases reported across the nation so far. "We anticipate a cumulative total, nationally, of more than a quarter of a million reported AIDS cases by 1991," Dr Koop said. "Your own state epidemiologists predict that some 16,000 of them will be Texans." He added that while the overall number of AIDS cases probably will increase nine-fold over the next five years, the number of AIDS cases involving heterosexuals will increase about 20-fold. Black and Hispanic populations represent a disproportionate percentage of the victims, he said.

Dr Koop asked that government and the private sector consider two primary issues: costs and patient care. "Some of our experts estimate that as early as 1991 the total national bill for the care of AIDS patients will be $16 billion a year, or nearly twice what we're spending this year to support all the programs of the entire US Public Health Service." He added, "We can't continue indefinitely to set aside beds for (AIDS patients) in our acute care and general hospitals. The costs—in both dollars and personnel—will simply overwhelm our hospital and social service systems."

Referring to his report on AIDS, which was released Oct 22, 1986, Dr Koop reminded the audience of his recommendation that, " . . . in order to end the chain transmission of this disease once and for all, we need to teach our young people the facts about AIDS and about their own sexuality." He added that such a program should be part of a comprehensive curriculum in school health education presented to 9-, 10-, and 11-year-olds. "My own preference . . . is to have our children introduced to the subject of reproductive biology within the context of learning about adult relationships that are loving, caring, respectful, and considerate," he added. "Strictly from a public health point of view, the best defense against AIDS, short of total abstinence, is to maintain a faithful, monogamous relationship . . . . My advocacy of monogamy may sound like a morality lesson, but in our battle against AIDS, it just so happens that—in addition to education—you can count science and morality as our most powerful allies."

Acknowledging that many individuals who do not have a monogamous relationship will not remain abstinent, Dr Koop advised that they need to know with absolute certainty that neither they nor any of their sexual partners are carrying the AIDS virus. If they are not absolutely certain, he suggested the following precautions:

"Don't have sex with someone who already has AIDS. That ought to be obvious.

"Don't share needles if you 'shoot' dangerous drugs. But better still, don't 'shoot' drugs at all.

"Don't have sex with someone who indulges in high-risk behavior. That would include homosexuals, intravenous drug users, and prostitutes and others who have many different sex partners. Obviously the same message goes to any of those high-risk individuals as well.

"And, finally, if you do decide to have sex with such an individual anyway—a decision carrying profoundly serious health consequences—then, if you're a man, at least use a condom from start to finish. If you're a woman, make sure your male partner uses a condom."

National diabetes study opens hotline for volunteers

A telephone hotline is available for immediate screening of potential volunteers for the Diabetes Control and Complication Trial (DCCT), a research study sponsored by the National Institutes of Health at various locations around the country. Local trials are being run at The University of Texas Health Science Center at Dallas.

"This is an exciting new way for people who have insulin-dependent diabetes to find out quickly whether they qualify for the DCCT, one of the most important studies in the history of diabetes research," said Dr Oscar Crofford, chairman of the national DCCT Study Group.

The DCCT is comparing the ability of different kinds of insulin treatment to prevent or slow development of diabetic complications of the eyes, kidneys, and nervous system. Volunteers must have had insulin-dependent diabetes for 15 years or less, be taking no more than two insulin shots a day, and be between the

"But I tell you, doc. It's not blood . . . it's sap!"

ages of 13 and 39. Patients accepted for the study will receive medical care for diabetes at no cost for up to six years.

The hotline, which is based at the DCCT Coordinating Center in the Biostatistic Center at George Washington University in Rockville, Md, screens volunteers by asking simple questions. If the caller is eligible for the study, he or she will be put in touch with the nearest of the 27 US and Canadian DCCT clinical centers, including the Dallas center.

Potential study volunteers are urged to call the toll-free number (1–800–522-DCCT) for pre-screening. The number operates 24 hours a day.

For more information about the program in the Dallas area, call (214)688–3497.

Committee studies AIDS, health care agencies

The Austin Area Infection Control Committee (AAICC) has issued its recommendations for management of AIDS in health care agencies. The recommendations were developed by the AAICC, a multidisciplinary group of local experts in infection control practices, to promote standardization and improvement of AIDS management in the Austin-area community. The report provides a consolidation and summary of important topics, clarification or resolutions for some controversial issues, and a list of the most significant references. Topics included in the report are patient confidentiality; blood and body fluid precautions; precautions during operative, obstetrical, or dental invasive procedures; HIV antibody testing; management of accidental exposure to blood and body fluids; employment issues; and notification of recipients of contaminated blood products.

Published by the Texas Department of Health in the March 14, 1987, issue of *Texas Preventable Disease News*, the recommendations are not meant to be all inclusive, but to be used in combination with the listed references. The document should be useful to agencies developing AIDS policies, procedures, and protocols.

SOCIOECONOMICS

Board warns physicians of unauthorized liability insurer

The State Board of Insurance warns physicians that an unauthorized professional liability insurer may be soliciting business in Texas.

Professional Risk Insurers Management Exclusive Company, Ltd, (PRIME) and its affiliate International Bahamian Insurance Company, Ltd, (IBI) are the subjects of reports of problems in handling claims defense and in paying professional liability judgments. The insurance board advises that PRIME is not licensed in Texas, nor is it authorized to do the business of insurance in the state.

Further information is available from John Moore, Staff Attorney, State Board of Insurance, 1110 San Jacinto, Austin, TX 78701–1998, phone (512)463–6407.

Commission issues report on physician payments

The Physician Payment Review Commission has issued its first report on Medicare's physician payment mechanisms. The report identifies four general alternatives for reforming the mechanisms: refining the current payment system, making payments according to a fee schedule, creating a system of all-inclusive fees for defined packages of services, and increasing the use of capitation payments. In the report, "Medicare Physician Payment: An Agenda for Reform," the commission examines the first two alternatives.

Congress created the Physician Payment Review Commission through the Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272), and the commission began its work in November 1986. Jim Bob Brame, MD, Eldorado, immediate past president of the Texas Medical Association, is one of the commission's 13 members, who include five physicians, a nurse, and experts in health policy, management, economics, politics, and insurance. The commission is mandated to make recommendations to the Congress by March 1 of each year regarding adjustments to reasonable charge levels, modifications in the methods for determining rates of payment, and changes in the methods for paying physicians for services under the Medicare program.

In its first report, issued March 1, 1987, the commission examines eight issues related to the current system of payments: geographic variation, inherent reasonableness, assignment and the participating physician program, the Medicare Economic Index (MEI), program administration, coding, assistance at surgery, and data.

The commission expresses "serious concerns" with geographic variations and recommended that changes be made soon. The report supports the use of recently enacted provisions on "inherent reasonableness" to make interim changes in relative payments, noting, " . . . inherent reasonableness has the potential of redressing distortions in relative payments that have arisen under current payment methods. Such changes may achieve short-term budget savings in ways that are more consistent with long-term policy directions than are across-the-board reductions in payment rates."

The report suggests careful monitoring and evaluation of the assignment and the participating physician program. At the same time, the Medicare program should continue to study additional ways to ease claims processing for participating physicians and increase beneficiaries' familiarity with the participating physician program. Additionally, the commission plans to study a number of methods for rebasing the MEI, which has limited rates of increases in allowable charges. The rebasing would be planned with an eye toward maintaining levels of program expenditures.

Toward reform of the current payment system, the commission also supports improved program administration, refined and standardized coding procedures, additional definitions and guidelines for payments for assistance at surgery, and continued efforts to improve the Health Care Financing Administration's data systems.

In its discussion of the alternative of making payments according to a fee schedule, the commission notes, "Because fee schedules retain fee for service

as the basis for payment, and there is extensive experience with them in the United States and abroad, they are generally considered the most feasible of alternatives in the near term." The report emphasizes that the endorsement of a fee schedule for Medicare does not preclude future recommendation of other methods for paying for physicians' services, either in addition to or in place of fee for service.

CAPITAL COMMENTS

TMA supports mammograms to screen for breast cancer

Screening mammograms promise "the exciting possibility that we'll see a significant inerease in the number of women who can say, 'I beat caneer,'" Nancy W. Diekey, MD, told the Texas House Human Services Committee during a recent hearing. The committee was considering House Bill 1241, which mandates insurance coverage of baseline mammograms for women 35 years of age and older.

Dr Dickey, a Richmond family physician who was 1986-1987 vice president of Texas Medical Association, told the committee that the incidence of breast cancer is increasing and that there is a 95% chance that the disease will be limited to the breast if it is found in a nonpalpable stage. She assured the members that mammography is a safe test that yields valuable information.

Noting that the average cost for a mammogram in Texas is $100, Dr Dickey added, "For many of my patients, $100 is prohibitive."

At press time, the House bill was under study by a subcommittee. Representative Patricia Hill (R-Dallas) sponsored the bill in the House of Representatives, and Sen Hugh Parmer (D-Fort Worth) sponsored the Senate version SB 1720. A hearing in the Senate Committee on Health and Human Services had been postponed.

NEWSMAKERS

BARTON A. KAMEN, MD, PhD, associate professor of pediatrics and pharmacology at The University of Texas Health Seience Center at Dallas, has been named recipient of the Burroughs Wellcome Clinical Pharmaeology Award for 1987. The award recognizes work in teaching, training, and research in clinical pharmacology and provides continued support for the awardee's work.

JOHN S. CHAPMAN, MD, a retired Dallas physician and professor, has been honored with the establishment of the John S. Chapman Visiting Professorship at The University of Texas Health Center at Tyler. As a member of the UT Southwestern Medical School faculty for many years, Dr Chapman was a consultant to the Tyler institution and helped establish its first research laboratory.

HARVEY S. ROSENBERG, MD, has been appointed as the first holder of The Chair in Pediatric Pathology at The University of Texas Health Science Center at Houston. Dr Rosenberg is professor of pathology and pediatrics at the medical school and is pathologist-in-chief at the University Children's Hospital at Hermann Hospital.

SUSAN RUDD WYNN, MD, a pediatrician and resident in allergy/immunology at the Mayo Graduate School of Medicine, has been elected the first ehairperson of the Advisory Panel to the Ameriean Medieal Association's Women in Medieine Project. A 1981 graduate of Texas A&M University College of Medieine, Dr Rudd Wynn served on the TMA Council on Communieation from 1978 to 1981 and was Medical Student Section Chairperson during 1979–1980.

ROBERT STONE, MD, has been appointed director of the Institute for Health Poliey Edueation and Research at The University of Texas Health Science Center at Houston. Dr Stone, who is dean of Texas A&M University's School of Medicine, will spend 20% of his time at the institute. He will coordinate and further develop the many health policy and related activities started by UT's Houston Health Policy Study Group in collaboration with the university's Center for Health and Manpower Policy Studies, the Center for Health Promotion Research and Development, the Health Law Program, and the Program on Humanities and Teehnology in Health Care.

Robert Stone, MD

Susan Rudd Wynn, MD

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS MEDICAL LIABILITY TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

ZOVIRAX®
(acyclovir)
CAPSULES

Prevent genital herpes recurrences month after month with daily therapy.

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

Please see last page of this advertisement for brief summary of prescribing information.

ZOVIRAX® (acyclovir) CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page

Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies,. the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤10 ml/min/1.73/m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200"- Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Wellcome | Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

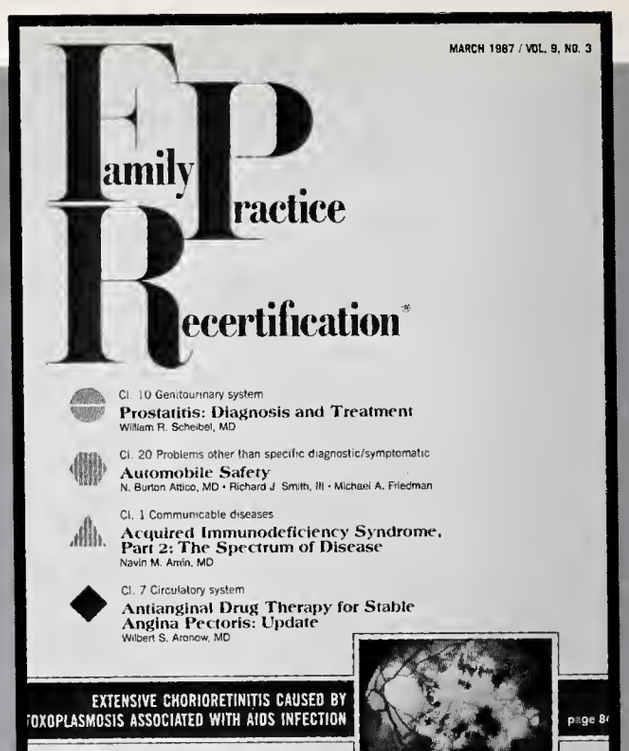
Copr. © 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology

- Provides 20 hours of CME Category 1 Credit


MARCH 1987 / VOL. 9, NO. 3
Family Practice Recertification
Cl. 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Scheibel, MD
Cl. 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Attico, MD • Richard J. Smith, III • Michael A. Friedman
Cl. 1 Communicable diseases
Acquired Immunodeficiency Syndrome, Part 2: The Spectrum of Disease
Navin M. Amin, MD
Cl. 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD
EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA - SUBCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

Oddly enough, "wild rhinos" talk to you only after they've dried up

...from too many days on drying antihistamines.

Back when all he had was a simple, runny rhinovirus, antihistamines made him feel more civilized. But now that sinusitis and bronchitis have set in, that continual barrage of self-medication with drying antihistamines has turned him into a "wild rhino."

Now his sinuses throb. His chest aches. And no matter how much he coughs and blows, those sluggish secretions don't budge.

"Wild rhinos" need more than a lesson in self-medication. They need your prescription for ENTEX® LA. ENTEX LA opens swollen sinus passages so he can breathe easier. Then it thins slow-moving respiratory secretions so coughing becomes less painful—more productive.

What's more, ENTEX LA doesn't contain anything to sedate him. Because a "wild rhino" is a lot easier to tame when his head is clear.

ANTIHISTAMINE-FREE

Entex® LA

PHENYLPROPANOLAMINE HCl 75 mg
GUAIFENESIN 400 mg

IN A SPECIAL BASE TO PROVIDE A PROLONGED THERAPEUTIC EFFECT.

Rx ONLY

Just decongestion and drainage... without antihistamine drying and drowsiness.

© 1986 NEPI

Please see next page for brief summary of prescribing information

ANTIHISTAMINE-FREE

Entex® LA

PHENYLPROPANOLAMINE HCl 75 mg
GUAIFENESIN 400 mg
IN A SPECIAL BASE TO PROVIDE A PROLONGED THERAPEUTIC EFFECT

Before prescribing or administering, see package circular for full product information. The following is a brief summary

INDICATIONS AND USAGE: Entex LA is indicated for the symptomatic relief of sinusitis, bronchitis, pharyngitis, and coryza when these conditions are associated with nasal congestion and viscous mucus in the lower respiratory tract.

CONTRAINDICATIONS: Entex LA is contraindicated in individuals with known hypersensitivity to sympathomimetics, severe hypertension, or in patients receiving monoamine oxidase inhibitors.

WARNINGS: Sympathomimetic amines should be used with caution in patients with hypertension, diabetes mellitus, heart disease, peripheral vascular disease, increased intraocular pressure, hyperthyroidism, or prostatic hypertrophy.

PRECAUTIONS: Information for Patients: Do no crush or chew Entex LA tablets prior to swallowing.

Drug Interactions: Entex LA should not be used in patients taking monoamine oxidase inhibitors or other sympathomimetics.

Drug/Laboratory Test Interactions: Guaifenesin has been reported to interfere with clinical laboratory determinations of urinary 5-hydroxyindoleacetic acid (5-HIAA) and urinary vanilmandelic acid (VMA).

Pregnancy: Pregnancy Category C. Animal reproduction studies have not been conducted with Entex LA. It is also not known whether Entex LA can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Entex LA should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether the drugs in Entex LA are excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants, a decision should be made whether to discontinue nursing or to discontinue the product, taking into account the importance of the drug to the mother.

Pediatric Use: Safety and effectiveness of Entex LA tablets in children below the age of 6 have not been established.

ADVERSE REACTIONS: Possible adverse reactions include nervousness, insomnia, restlessness, headache, nausea, or gastric irritation. These reactions seldom, if ever, require discontinuation of therapy. Urinary retention may occur in patients with prostatic hypertrophy.

OVERDOSAGE: The treatment of overdosage should provide symptomatic and supportive care. If the amount ingested is considered dangerous or excessive, induce vomiting with ipecac syrup unless the patient is convulsing, comatose, or has lost the gag reflex, in which case perform gastric lavage using a large-bore tube. If indicated, follow with activated charcoal and a saline cathartic. Since the effects of Entex LA may last up to 12 hours, treatment should be continued for at least that length of time.

NDC 0149-0436-01 Bottle of 100

CAUTION: Federal law prohibits dispensing without prescription.

ENX LATB-BS7

REVISED JULY 1985

Norwich Eaton
Norwich Eaton Pharmaceuticals, Inc.
Norwich, New York 13815-0231
A Procter & Gamble Company

IN SEARCH OF EXCELLENCE

Texas Needs a Great Pair of Hands. . . Yours.

In the Texas Army National Guard there is an elite group of Surgeons, Physicians, and Nurses who have dedicated themselves to serving their fellow countrymen. They have pledged their services one week-end a month to helping their city, state, and nation during times of crisis.

Some are seeking challenges that no ordinary medical practice can deliver. Some relish the privileges, benefits, and honors which accompany military service.

With your skill, patriotism, and participation, the Texas Army National Guard's 150 year tradition of Texans protecting Texans can continue.

FOR MORE INFORMATION:

Call 1-800-252-9995 toll free-or
Write to: The Adjutant General of Texas
P.O. Box 5218
ATTN: AGTX-PR
Austin, Texas 78763-5218

TEXAS ARMY NATIONAL GUARD
1-800-252-9995

HOSPITAL MEDICAL STAFF LEADERSHIP CONFERENCE

Audio cassette tapes are available of the Hospital Medical Staff Leadership Conference, held April 3–5 in San Antonio, to help physicians develop their leadership, management, and communication skills. Nationally known professionals discuss numerous topics on the tapes regarding delivery of medical services through the hospital setting and how to use your time and services efficiently and effectively. Practical tips on improving communication and management skills are covered also.

Tapes are $7.45 each including tax. For an order form listing speakers and their topics on the 14-tape set, call TMA's Department of Health Care Delivery at 512/477-6704, ext. 260.

Over 84% of Warm Springs patients return home.

Rehabilitation of the physically disabled is our *only* specialty.

Warm Springs Rehabilitation Hospital treats patients who have suffered disabling strokes, crippling accidents from head injuries or damage to the spinal cord, as well as those disabled with birth defects.

And we're very good at what we do because rehabilitation is all we do. For example, over 81% of our stroke patients returned home; over 86% of our quadriplegics returned home; and over 91% of our paraplegics returned home.

This remarkable success rate is because we specialize. Our doctors are rehabilitation specialists. Our therapists in the physical, occupational and recreational areas are highly trained and experienced professionals. As are those in speech and hearing, psychology, orthotics and nursing.

And we are not new to the rehabilitation field. We have over 40 years of experience and success behind us. If you'd like the best for your patients, contact Dr. Larry Browne at Warm Springs Rehabilitation Hospital. Better yet, call him toll-free 1-800-292-1440.

WARM SPRINGS REHABILITATION HOSPITAL

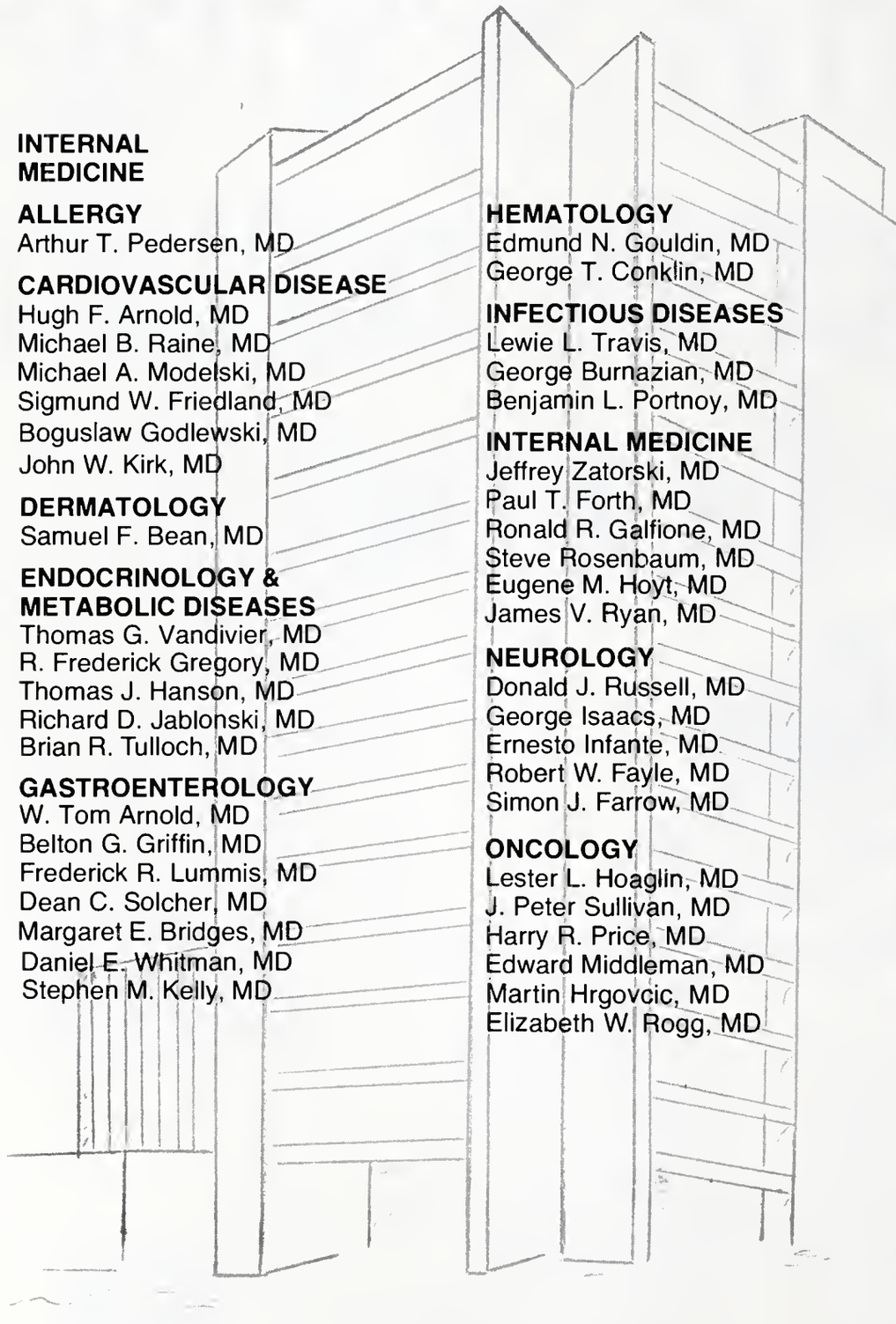
P.O. Box 58 • Gonzales, Texas 78629
Toll-Free in Texas 1-800-792-WARM

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH



INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD
John W. Kirk, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Daniel E. Whitman, MD
Stephen M. Kelly, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
Eugene M. Hoyt, MD
James V. Ryan, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

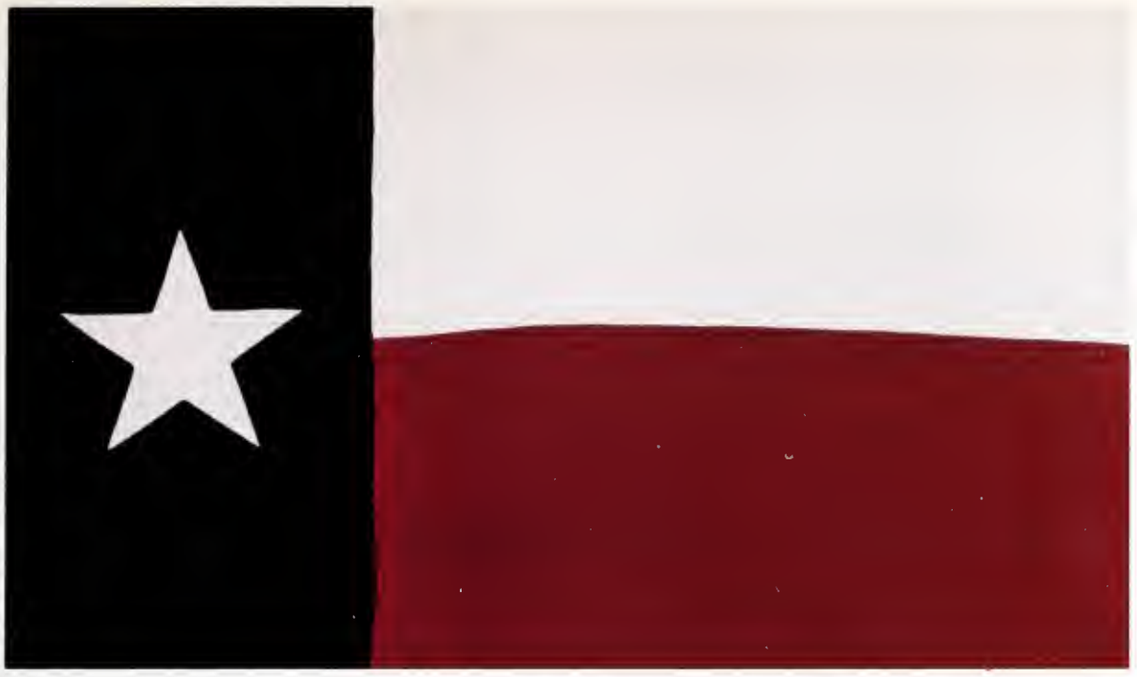
PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

State flag of Texas



Flag It.

To complete your prescription,
be sure to sign on the right,
on the "Dispense As Written" line.
This "flags" both pharmacist and patient
that you want the *brand* to be dispensed.
And it protects your decision.

VALIUM®

brand of
diazepam/Roche®

scored tablets

2 mg 5 mg 10 mg

The one you know best.

The cut out "V" design is a registered trademark of Roche Products Inc.

Copyright © 1987 by Roche Products Inc.
Manati, Puerto Rico 00701. All rights reserved.

ROCHE®

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

HENRY B. KIRBY, MD

MICHELE HABER-SCHARF, MSSW, MPH

JUDITH BAER, ACSW

SERENA PICKMAN, RN

Geriatric evaluation program in a private hospital: implications for health care planning

This article describes 108 hospital admissions from the community into a non-geographical multidisciplinary geriatric program. The patients, whose average age was 78, were followed for 15 months. Of these patients, 62% had impaired activities of daily living (ADL), 50% impaired nutrition, and 61% psychiatric illness. Complications due to procedures and medications were 4% and 16%, respectively. Mean length of stay was 13 days, excluding outliers. New diagnoses were found in 81%, and medications were reduced for 35% and simplified for 41%. Improvements in ADL were noted for 70% of those impaired. Combined in- and out-of-hospital mortality rate was 10%. Nine percent of patients were placed in nursing homes; 16% were rehospitalized; and 63% maintained improvements gained. Reports in the literature indicate these results represent enhanced care when compared to results for either the average Medicare patient or other frail elderly patients. Implications for health care planning are discussed.

Multidisciplinary geriatric teams were first established in the United Kingdom in separate geriatric hospitals or units (1-3) and have been reported to be useful in evaluating and treating geriatric patients in several circumstances (4,5). The model has been adopted in the United States at Veterans Administration (VA) hospitals as a proposed solution to the plight of certain frail elderly patients (6). A prospective randomized study from a VA hospital has demonstrated improved care and reduced costs for elderly patients in a special unit (7), and another substantial compliance by house officers with the recommendations of a consultation team (8). However, no information exists from acute-care, non-public, not-for-profit hospitals. This report is from such an institution, from which we previously reported the formation of a geriatric evaluation team project (4). We now present the results of that team's management of selected frail elderly patients, without the provisions of a geographically separate unit, and discuss the implications for health care planning.

Patients and methods

The Methodist Hospital is a 1,200 bed non-public, not-for-profit, acute-care hospital located in the Texas Medical Center in Houston and affiliated with Baylor College of Medicine. In addition to the main Methodist Hospital, The Methodist Hospital Health Care Network manages 22 other hospitals, including four in Mexico, one in Turkey, and two in Italy. In December 1983, a geriatric evaluation team was inaugurated in the main Methodist Hospital as a pilot project. The purpose was to assess the value of the multidisciplinary approach to geriatric care, to implement the project through the use of hospital services under the supervision of an internist specializing in geriatrics, as opposed to the usually ad hoc use of these services, and to gather data that would assist the administration in planning the future of geriatrics at the hospital.

The geriatric evaluation team seeks to maintain the frail elderly in the community when possible, to provide realistic counseling for alternative care when maintenance in the community is not possible, and to avoid the repeated acute-care hospitalizations which are so often the lot of this group of patients.

The core geriatric team consists of the physician-director, a nurse specialist in geriatrics, and a geropsychiatric social worker. Initial assessment of patients and daily rounds are conducted by the core team. Each week the core team meets with the full team, which consists of a clinical psychologist, a dietitian, two registered nurses who act as patient representatives, a pharmacist, a physiatrist, a representative of the hospital-based home health care service, a utilization review/diagnosis related group specialist, a speech pathologist and a physical therapist. The members of the full team act in an advisory capacity and see patients individually when requested.

The geriatric evaluation team provides consultation to the patients, their families, and physicians, among whom a complete exchange of information is promoted. Prior to discharge, the team devises a program to consolidate gains made in the hospital, and provides follow-up support to maintain improvements achieved or to meet the challenge of new developments which threaten the patient's stability.

Results

Between December 1983 and December 1984 there were 88 patients admitted to the hospital to team surveillance, and followed until March 1985 through 108 admissions. The follow-up period ranged from 2 to 15 months with a mean of 8 months. All patients were admitted to the study from the community rather than from institutions. More than half of patients reported were referred directly to the team by themselves, their families, or other physicians. Other patients included in the study were already hospitalized, and the team was consulted within 48 hours of admission. The patients were not randomly selected, but were referred because they were perceived as having problems that disabled them. No control group existed during the study period. Of the 108 admissions, 61% were to the internal medicine service, 13% to orthopedics, 10% to psychiatry, and 12% to

Henry B. Kirby, MD, Chief, Geriatric Evaluation Team, The Methodist Hospital, Houston, and Medical Advisor for the Hospital-Based Home Health Care Department and Clinical Professor of Medicine, Baylor College of Medicine; Michele Haber-Scharf, MSSW, MPH, and Judith Baer, ACSW, Geriatric Evaluation Team Social Workers; and Serena Pickman, RN, Geriatric Evaluation Team Nurse. Send reprint requests to Dr Kirby, 7505 S Main St, Houston, TX 77030.

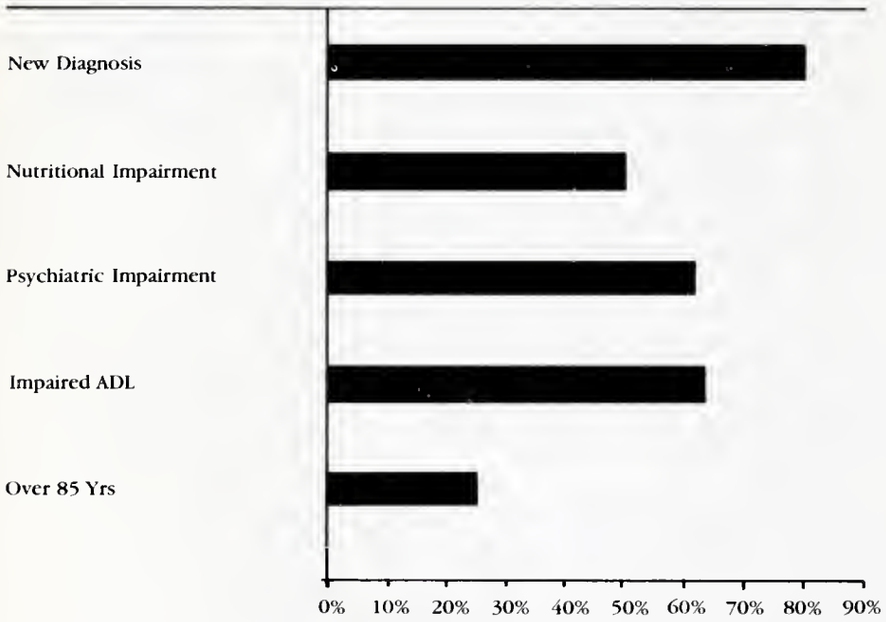
other services. An interservice transfer after admission occurred 14% of the time.

The results of the study are presented in the accompanying figures, which are largely self-explanatory. Brief additional explanatory comments are provided.

CLINICAL CHARACTERISTICS

Ages of patients ranged from 65 to 98 with a mean age of 78, and 52% were over 80 years. A significant diagnosis was defined as one not previously recognized, which compromised patient function and was amenable to treatment. These occurred with a mean frequency of 1.8 per patient per admission. The mean number of all active diagnoses per patient per admission was 5.4, with 3.8 considered to be a contributing factor either to admission or prolongation of hospital stay. Activities of daily living were determined by the Katz index (9,10). Fifty-seven percent of the patients required assistance in bathing, dressing, and at least one other ADL, and 37% were nearly or completely dependent on others. All psychiatric problems led to impaired patient function and also necessitated psychotrophic medications, psychiatric consultation, or both. Of the 61% with psychiatric diagnoses, 38% included depression, 15% dementia, 14% personality disorders, and 24% some other diagnosis. Nutritional status was judged by history, anthropometrics, and biochemical standards. Of the 50% who were nutritionally impaired, none had financial constraints precluding an adequate diet (Fig 1).

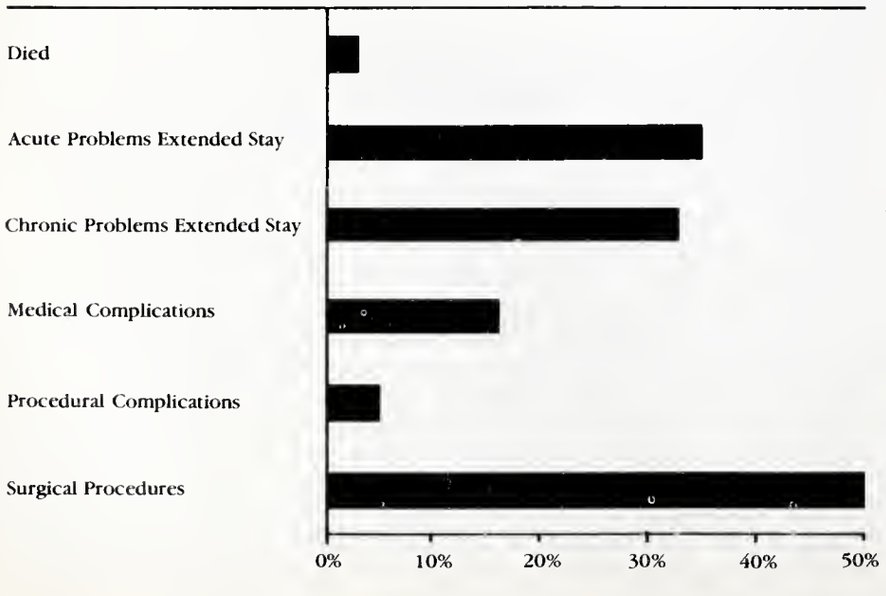
1. Clinical characteristics noted on admissions to the hospital.



HOSPITAL COURSE

Surgical procedures included major procedures such as laminectomy and cholecystectomy as well as minor procedures such as insertion of a subclavian catheter and arteriography (Fig 2). None of the medications or procedure-related complications was life-threatening or resulted in death or major disability. The majority of the patients stayed in the hospital two weeks or less (Fig 3). In 10% of admissions, five days were added to the length-of-stay figure. Excluding these, the average length of stay was 13 days.

2. Important events occurring during the hospital stay.



OUTCOME AT DISCHARGE

The improvement in ADL noted for 40% of hospital admissions represents a 70% improvement for those actually found to be impaired. Among those having their medications decreased, the mean reduction was 2.3 medications per patient per admission. The shortened length of stay realized by the use of home health care was determined by a consensus of the core team, corroborated by the patients' primary physicians (Fig 4). Estimated savings in days ranged from 2 to 14, with a mean savings of 7 days.

OUTCOME AT FOLLOW-UP

Figures given represent percentages of the original number of study patients. Observations are for a 15-

3. Length of hospital stay for all admissions.

Range in Days	% Admissions
1–14	60
15–20	15
21–30	15
31–98	10

month period. At the end of the study, 63% of study patients were alive in the community, had not been placed in nursing homes or been rehospitalized, and had maintained improvements without functionally important regression (Fig 5).

Discussion

Available data about the disabilities of the elderly, whether living in the community, admitted to acute-care hospitals, or in nursing homes, tends to be fragmentary. The elderly themselves are notorious under-reporters of their own disabilities (11,12). Much less is known about the frail elderly themselves, or the outcome of various modalities of treatment.

In the United States, 22% of all Medicare reimbursements have been noted to be spent in behalf of 5% of beneficiaries, all of whom died during the year (13). Similarly, in the Manitoba Longitudinal Study on Aging, 78% of acute in-patient health care services were utilized by 10% of old people (14). It is the disabled frail elderly minority which geriatric evaluation teams are designed to help most.

Important known facts about the disabilities of the elderly observed in the community and acute and chronic care settings are discussed herein. How the group of patients we report may relate to these data is noted.

THE PHYSICALLY DISABLED

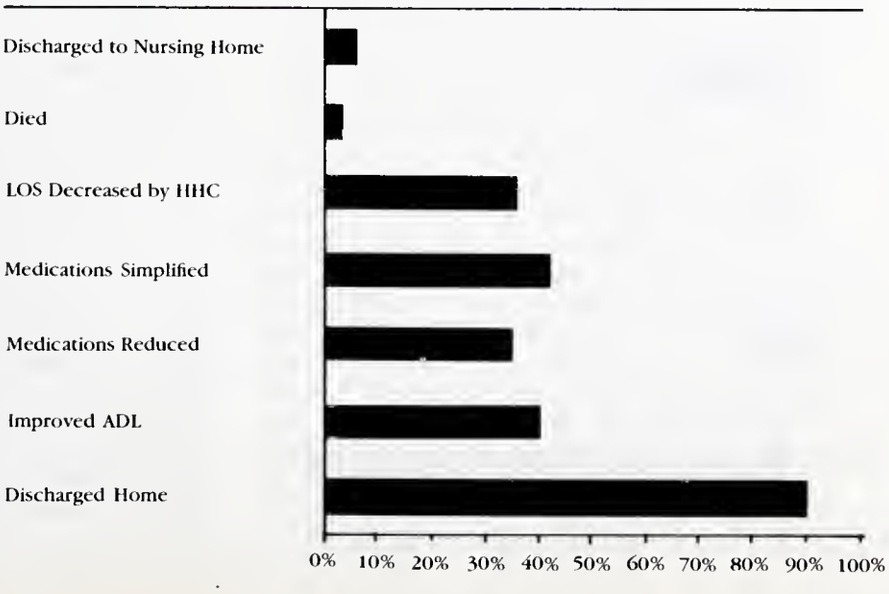
Among the some 25 million persons in the United States over 65 years of age, 80% are estimated to be suffering from at least one chronic disease (15–17), and 43% to have some limitation of activity due to chronic disease (18,19). For 15% to 21% of Americans over 65 living in the community, the limitation assumes the proportions of considerable functional disability (19–21). This figure rises to 20% for ages 75 to 84, and 31% for those over 85 years (20). Five percent of the non-institutionalized elderly are confined to their homes by these disabilities (18). Upon reaching an acute-care hospital, slightly more than 50% of elderly patients have been found to have inadequate function in an activity of daily living (22,23). Of our patients, 61% were impaired in activities of daily living, a rate which was higher than we had anticipated from the experience of others.

THE NUTRITIONALLY DISABLED

Disability in the form of nutritional impairment among the elderly living in the community is difficult to estimate, but is generally agreed to represent a considerable problem (24). It is not restricted to low income groups (25). Ten percent of elderly community dwellers were noted to consume a diet containing less than two thirds of the recommended daily allowance for three out of five nutrients (26), and 12% of those over 60 years of age living in the community were found to have a diet inadequate in protein (27).

In a municipal hospital setting, protein-calorie malnutrition was discovered among some 50% of medical and surgical patients by anthropometric and biochemical standards (28). Patients in an extended care facility from a middle class background were observed to be somewhat better nourished, also by anthropometric and biochemical measurements (29). Many took vitamins and mineral supplements. Nevertheless, 6% were noted to be anemic, a similar percent to have a low serum albumin level, 13% a low serum folate level, and 26% low vitamin B6 levels.

Although our patients might have been presumed



4. Outcome on discharge from the hospital.

to be both older and more advantaged than patients in a municipal hospital, nutritional impairment was also found during 50% of our admissions.

THE PSYCHIATRICALLY DISABLED

Psychiatric illness as a disability among the elderly living in the community is estimated to affect 15% to 25% to a degree indicating active intervention (30). Furthermore, one half of psychiatric admissions to outpatient psychiatry clinics and to acute-care hospitals have been noted to be from the ranks of older persons, with depression being the most common diagnosis (16). In keeping with the interference that psychiatric illness is epidemic among the elderly, 62% of our admissions had a psychiatric illness diagnosed during a hospital confinement.

USE OF ACUTE-CARE HOSPITALS

The elderly utilize 30% to 40% of all short-stay hospital days (18,31,32), and tend to remain in the hospital 50% longer than their younger counterparts (32). In 1979 the mean length of stay for all Medicare patients, not just the frail elderly, was 11 days (33) which has recently decreased to just under 9 days (34), a downward trend which actually preceded DRGs by more than a decade (15). The frail elderly stay in the hospital longer than the average Medicare patient. Even in the same time period, the lengths of stay for the elderly vary by locality, institution, and the attributes of the particular cohort being scrutinized, an important point which can be illustrated by examining data which is available for 1979–1983.

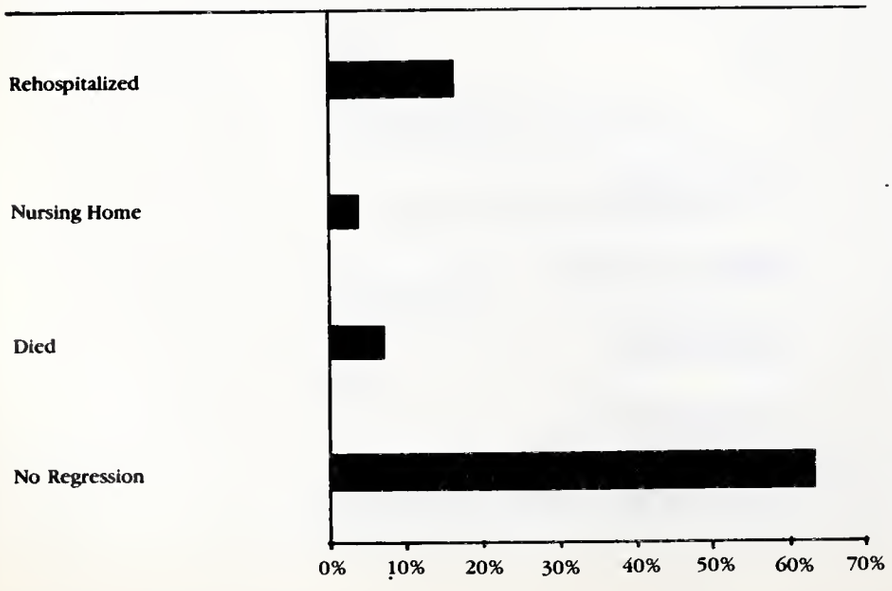
Forty-nine hospitals in the greater Boston area found the mean stay for the elderly population as a whole to be 15 days (35). The same length of stay for similar patients in a university hospital was shortened to 12 days in a special geriatric nursing unit (36). During this period, lengths of stay for the frail elderly subset were considerably longer than for the average Medicare patient (6,7,37).

In a controlled VA hospital study of frail elderly patients, total initial hospital days averaged 85 for patients in a special geriatric unit and 44 for controls randomly assigned to traditional care (7). It should be noted that geriatric unit patients spent significantly less time in acute care hospitals during a 12-month follow-up than did controls. Warshaw, in an analysis of the frail elderly in hospitals outside the VA system, found a mean length of stay of 21 days (22), similar to the 23 days experienced in a community hospital (38).

Outpatient supervision of care by modalities such as home health care may allow appropriate earlier discharge of elderly patients (39). Aftercare programs have been inferred to be important in preventing rehospitalization of a frail elderly population (23). Medicare patients have a rehospitalization rate of 49.7% in the year following acute-care confinement (40). In this context it is important to note that it is the patient with chronic diseases who is repeatedly hospitalized for the same problem who is the high-cost consumer of medical care, rather than the patient who is admitted for a single lengthy illness (41). The elderly are disproportionately represented in this group. Eighty percent of Medicare inpatient costs have been spent in behalf of that 23% of beneficiaries who were hospitalized more than once in a three-year period (40).

In the present study of frail elderly patients, the average length of stay was 13 days, excluding a small number of outliers. Only 18% of admissions during a 15-month period were rehospitalizations, representing 16% of all patients.

5. Outcome during follow-up outside the hospital.



IATROGENIC ILLNESS

Disability from iatrogenic illness is not uncommon in hospitalized patients (42), and particularly so among the elderly (43–45). In a university hospital, 36% of all patients surveyed suffered an iatrogenic illness while in the hospital, and 9% suffered a major complication that was life-threatening or resulted in considerable disability (43). Patients 70 to 80 years old had twice as many adverse medication reactions as those in the 40- to 50-year age range (45). Among hospitalized veterans, 29% of those under age 65 and 45% of those over age 65, suffered an iatrogenic illness (44).

Patients in the present study experienced a relatively low procedure-related complication rate of 5% in the hospital, and a medication complication rate of 16%. None of these events resulted in a life threatening situation or major disability.

THE USE OF NURSING HOMES

Institutionalization is a highly problematic area for the disabled elderly patient. Eighty-six percent of nursing home residents are over 65 years of age (46). It is a well known and often quoted statistic that only 5% of the nation's geriatric population is in a nursing home (47). However of those persons over 85 years of age, 20% are in nursing homes (48). Furthermore, these figures, which represent cross-sectional data, may be misleading. There is a 20% to 40% chance of spending some time in a nursing home during a lifetime, depending on the data consulted (49–51), and 25% of the elderly have been noted to die in such institutions (48). Forty percent of the Medicaid budget is spent on nursing home care (49).

The rate at which all elderly patients are discharged from short-stay hospitals to nursing homes has been estimated to be 9% (49). However 20% to 29% of patients over age 75 were discharged to nursing homes (23,52). In the controlled VA study of frail elderly patients, 13% were discharged from the geriatric unit to nursing homes, and 17% more were so placed during follow-up (7). This number compared favorably to controls who were discharged to nursing homes at the rate of 30%, with 12% more being institutionalized during follow-up.

In the present study, patients were discharged from the hospital to nursing homes at the relatively modest rate of 5.6% and only an additional 3% were placed in these institutions after discharge to the community.

MORTALITY RATES

The annual mortality rate for all causes for all persons over 65 years of age in the United States is reported to be 10%, and for those over 75, 13% (53). Like lengths of stay, rates of nursing home placement and rates of rehospitalization, mortality rates vary not only with age but also with circumstances (54). The frail elderly have been noted to have an in-hospital mortality rate in excess of 14% (6,52). When elderly patients are admitted to nursing homes it has been observed that one-third to one-half die within 12 months (55).

The in-hospital mortality rate for the frail elderly patients we report was 3%, with 7% dying outside the hospital during the 15-month follow-up period.

COST

Only one prospective randomized study comparing costs of care utilizing the multi-disciplinary geriatric team approach and standard care has been published, and it is from a VA hospital (7). Geriatric team care was less costly, despite the fact that team patients were hospitalized longer at the time of initial contact, primarily because during the follow-up period, team patients spent significantly less time in hospitals and nursing homes.

Our study was not such a cost analysis. However, we can infer that our patients were a less costly group than other similar patients for several reasons. They had a much lower rate of rehospitalization and a somewhat lower rate of nursing home placement than the average Medicare patient and substantially less than that reported for other frail elderly patients whom they more closely resemble (7,23,40,49,52). Additional reductions for in-hospital costs can be realized from the low rate of iatrogenic illness experienced by our patients compared to the medication and procedure related complications reported elsewhere (43–45). Further savings can be inferred from a reduction in the cost of medications because the number and frequency was reduced, and from the use of less costly alternatives to hospitalization such as home health care. These inferences are made more striking by re-emphasizing that our patients were predominantly frail elderly patients who were older and more disabled than the average Medicare patient.

Conclusion

Elderly people are not a homogeneous group. Statistics which treat them as such have limited usefulness. Age may be an important issue, not as a primary determinant, but because the chance of the occurrence of functional disability increases with advancing age. The disabilities of a group of elderly persons and the environmental circumstances must be defined before the data are useful to others as a reference point. This principle is particularly important for health care providers who seek to deal with expectations regarding the natural history of a cohort or the outcome of interventions.

The patients we describe represent a selection from the more severely impaired of the community at any advanced age. The life expectancy for a Caucasian female born in the United States in 1983 was 78 years (56), an average age already attained by our patients. Sixty-two percent of the patients we report were functionally disabled upon admission to the hospital, 57% remarkably so, and 37% nearly or completely dependent on others. These patients had multiple problems and averaged 3.8 active problems contributing to their hospitalization. Sixty-one percent of the admitted patients had substantial psychiatric impairments. In many ways they resembled the nursing home patient who has been reported to have an average age of 75 on admission to the institution, where such patients have been found to have an average of 3.9 chronic active problems per patient (51), 66% to have an important psychiatric problem, and 67% to be functionally impaired in a major activity of daily living (57, 58).

Nevertheless, the patients we report demonstrated substantial improvements in activities of

daily living, reductions both in numbers of prescription medications and the complexity of drug regimens, restoration of previously impaired nutrition, treatment of much previously unsuspected psychiatric illness, and discovery of many previously unrecognized treatable problems. These accomplishments were joined with moderate rates of death, institutionalization, and rehospitalization, which were less than those reported for the average Medicare patient and substantially less than those reported for other groups of frail elderly.

It is concluded that the geriatric evaluation team at The Methodist Hospital achieved beneficial results for the elderly patients described in this report, and the care model can be inferred to be cost effective. Further use of this approach in similar circumstances is warranted in other private acute-care hospitals. We are developing prognostic categories which are proving to be useful in predicting outcome for certain types of patients. We expect that these categories will allow a more judicious use of resources while providing the highest standard of care. Control groups also are being evaluated. It is expected that more informed decisions will be made regarding treatment efforts and plans for future care of patients following hospital discharge. The beneficiaries of this type of planning will be patients, their families, our health care institutions, and the health care system.

REFERENCES

1. Matthews DH: Dr. Majory Warren and the origin of British geriatrics. J Am Geriatr Soc 32(4):253–258, 1984.

2. Hodkinson HM, Jefferys PM: Making hospital geriatrics work. Br Med J 4(839):536–539, 1972.

3. Kleh J: When to institutionalize the elderly. Hosp Pract 12(2):121–134, 1977.

4. Kirby HB, Palmer S: The geriatric evaluation team. Tex Med 80(12):31–34, 1984.

5. Barker WH, Williams TF, Zimmer JG, et al: Geriatric consultation teams in acute hospitals: impact on back-up of elderly patients. J Am Geriatr Soc 33(6):422–428, 1985.

6. Rubenstein LZ, Abrass IB, Kane RL: Improved care for patients on a new geriatric evaluation unit. J Am Geriatr Soc 29(11):531–536, 1981.

7. Rubenstein LZ, Josephson KR, Wieland GD, et al: Effectiveness of a geriatric evaluation unit. A randomized clinical trial. N Engl J Med 311(26):1664–1670, 1984.

8. Allen CM, Aecker PM, McVey LJ, et al: A randomized, controlled clinical trial of a geriatric consultation team. Compliance with recommendations. JAMA 255(19):2617–2621, 1986.

9. Katz S, Ford AB, Moskowitz RW, et al: Studies of illness in the aged: the index of ADL: a standardized measure of biological and psychosocial function. JAMA 185:914–919, 1963.

10. Katz S, Downs TD, Cash HR, et al: Progress in development of the index of ADL. Gerontologist 10(1):20–30, 1970.

11. Williamson J, Stokoe IH, Gray S, et al: Old people at home: their unreported needs. Lancet 1:1117–1120, 1964.

12. Brody EM, Kleban MH, Moles E: What older people do about their day-to-day mental and physical health symptoms. J Am Geriatr Soc 31:489–498, 1983.

13. Gormick M: Ten years of Medicare: impact on the covered population, US Department of Health, Education, and Welfare publication No. SSAJ76–11700, 1976.

14. Roos NP, Shapiro E: The Manitoba longitudinal study in aging: preliminary findings on health care utilization of the elderly. Med Care 19(6):644–657, 1981.

15. Kovar MG: Health of the elderly and use of health services. Public Health Rep 92(1):9–19, 1977.

16. Health United States 1976–1977, US Department of Health Education and Welfare, publication No. 77–1232, 1977.

17. Eisdorfer C: Issues in health planning for the aged. Gerontologist 16(1 Pt 1):12–16, 1976.

18. Givens JD: Current estimates from the health interview survey: United States, 1978. Vital Health Stat 10(130):1–98, 1979.

19. Limitations of activity due to chronic conditions, United States, 1974, US Department of Health, Education, and Welfare, publication No. (HRA) 77–1537, 1977.

20. A chartbook of the Federal Council on Aging, 1981, DHHS publication No. (DHDS) 81–20704.

21. Baltay MS: Long-term care of the elderly and disabled. Congressional Budget Office, Washington, DC. Human Resources Div. February, 1977.

22. Warshaw GA, Moore JT, Friedman SW, et al: Functional disability in the hospitalized elderly. JAMA 248(7):847–850, 1982.

23. Campion EW, Jette A, Berkman B: An interdisciplinary geriatric consultation service: a controlled trial. J Am Geriatr Soc 31(12):792–796, 1983.

24. Food and nutrient intake of individuals in the US, Spring 1965. United States Department of Agriculture Household Food Consumption Survey, 1965–1966, Dept 11, Washington, DC, 1972.

25. Ten state nutrition survey, 1968–1970, US Department of Health, Education, and Welfare, publication No. (HSM) 71–8133, 1972.

26. Dibble MV, Brin M, Thiele VF, et al: Evaluation of the nutritional status of elderly subjects, with a comparison between fall and spring. J Am Geriatr Soc 15(11): 1031–1061, 1967.

27. Preliminary findings of the first Health and Nutrition Examination Survey, United States, 1971–1972; Dietary intake and biochemical findings. Department of Health, Education, and Welfare publication No. (HRA) 74–1219–1, 1974.

28. Bistrian BR, Blackburn GL, Vitale J, et al: Prevalence of malnutrition in general medical patients. JAMA 235(15):1567–1570, 1976.

29. Smith JL, Wickiser AA, Korth LL, et al: Nutritional status of an institutionalized aged population. J Am Coll Nutr 3(1):13–25, 1984.

30. Gurland BJ, Cross PS: Epidemiology of psychopathology in old age. Some implications for clinical services. Psychiatr Clin North Am 5(1):11–26, 1982.

31. Gibson RM, Fisher CR: Age differences in health care spending, fiscal year 1977. HCFA Health Note, December, 1978.

32. Tobis JS: The hospitalized elderly, editorial. JAMA 248(7):874, 1982.

33. Utilization of short stay hospital. Annual summary for the US, 1979. USDH:NCH3 Vital Health Statistics, 60(13):20, 1980.

34. Freko D: Admissions fall but margins are up in '84. Hospitals 59(9):70–72, 1985.

35. Markson EW, Steel K, Kane E: Administratively necessary days: more than an administration problem. Gerontologist 23:486–492, 1983.

36. Saunders RH, Hickler RB, Hall SA, et al: A geriatric special-care unit: experience in a university hospital. J Am Geriatr Soc 31(11):685–693, 1983.

37. Rubenstein LZ, Wieland D, English P, et al: The Sepulveda VA Geriatric Evaluation Unit: data on four-year outcomes and predictors of improved patient outcomes. J Am Geriatr Soc 32(7):503–512, 1984.

38. Applegate WB, Akins D, Vander Zwaag R, et al: A geriatric rehabilitation and assessment unit in a community hospital. J Am Geriatr Soc 31(4):206–210, 1983.

39. Schuman JE, Beattie EJ, Steed DA, et al: The impact of a new geriatric program in a hospital for the chronically ill. Can Med Assoc J 118(6):639–645, 1978.

40. Anderson GF, Steinberg EP: Hospital readmissions in the Medicare population. N Engl J Med 311(21): 1349–1353, 1984.

41. Zook CJ, More FD: High cost users of medical care. N Engl J Med 302:966–1002, 1980.

42. Reichel W: Complications in the care of five hundred elderly hospitalized patients. J Am Geriatr Soc 13:973–981, 1965.

43. Steel K, Gertman PM, Crescenzi C, et al: Iatrogenic illness on a general medical service at a university hospital. N Engl J Med 304(11):638–642, 1981.

44. Jahnigen D, Hannon C, Laxson L, et al: Iatrogenic disease in hospitalized elderly veterans. J Am Geriatr Soc 30(6):387–390, 1982.

45. Vestal RE: Drug use in the elderly: a review of problems and special considerations. Drugs 16(4):358–382, 1978.

46. Health United States 1979, US Department of Health, Education, and Welfare publication No. (PHS) 80–1232, 1980.

47. Soldo BJ: America's elderly in the 1980's. Population Bulletin. Washington, DC, United States, 35(4):1–48, 1980.

48. Palmore E: Total chance of institutionalization among the aged. Gerontologist 16(6):504–507, 1976.

49. Kane RL, Matthias R, Sampson S: The risk of placement in a nursing home after acute hospitalization. Med Care 21(11):1055–1061, 1983.

50. Vincente L, Wiley JA, Carrington RA: The risk of institutionalization before death. Gerontologist 19(4):361–367, 1979.

51. Kastenbaum R, Candy SE: The 4 per cent fallacy: a methodological and empirical critique of extended care facility population statistics. J Aging Hum Dev 4:15–21, 1973.

52. Lamont CT, Sampson S, Matthias R, et al: The outcome of hospitalization for acute illness in the elderly. J Am Geriatr Soc 31(5):282–288, 1983.

53. Advanced Report. Final mortality statistics, 1978, from the National Center for Health Statistics. Monthly Vital Statistics Report, Vol 29, No 6, Suppl 2. US Department of Health and Human Services publication No. (PHS) 80–1120, 1980.

54. Shapiro E: Impending death and the use of hospitals by the elderly. J Am Geriatr Soc 31(6):348–351, 1983.

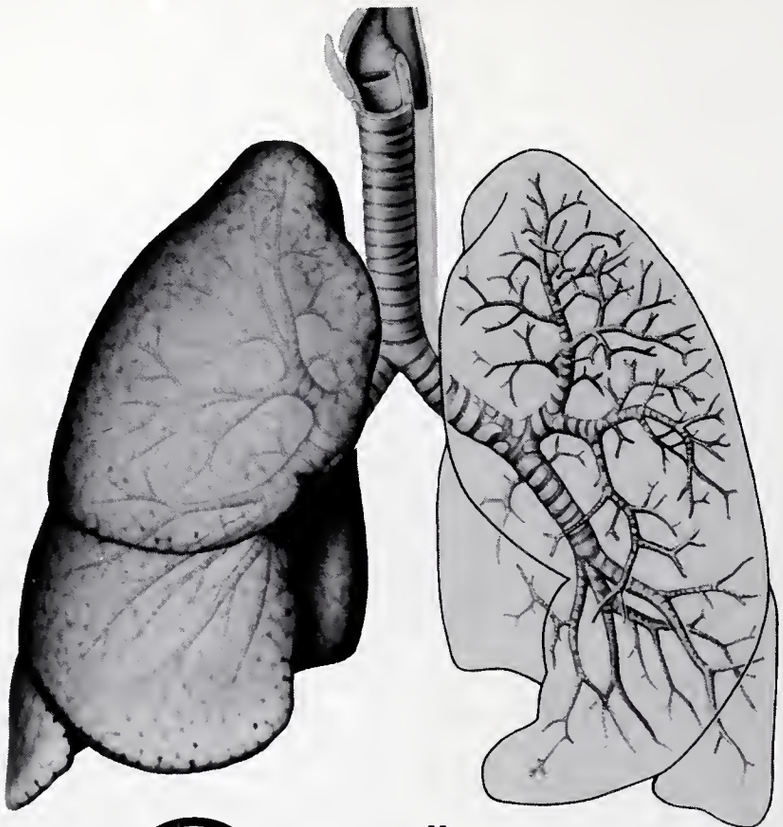
55. Lichenstein MJ, Federspiel CF, Schaffner W: Factors associated with early demise in nursing home residents. J Am Geriatr Soc 33:315–319, 1985.

56. Statistical Abstract of the United States, US Department of Commerce, 105th Edition, 1985.

57. Physicians and the care of nursing home residents, in Cassel CK, Walsh JR (eds): Geriatric Medicine, vol 2. New York, Springer-Verlag, 1984, pp 397–412.

58. Mental status and living arrangements, current population reports: population estimates and projections, Ser P-20, No 349. US Department of Commerce, Bureau of the Census, 1980.

Consider the causative organisms...



Ceclor®
cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULO BE AOMINISTEREO CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS ANO CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE RE ACTIONS INCLUOE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicilin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

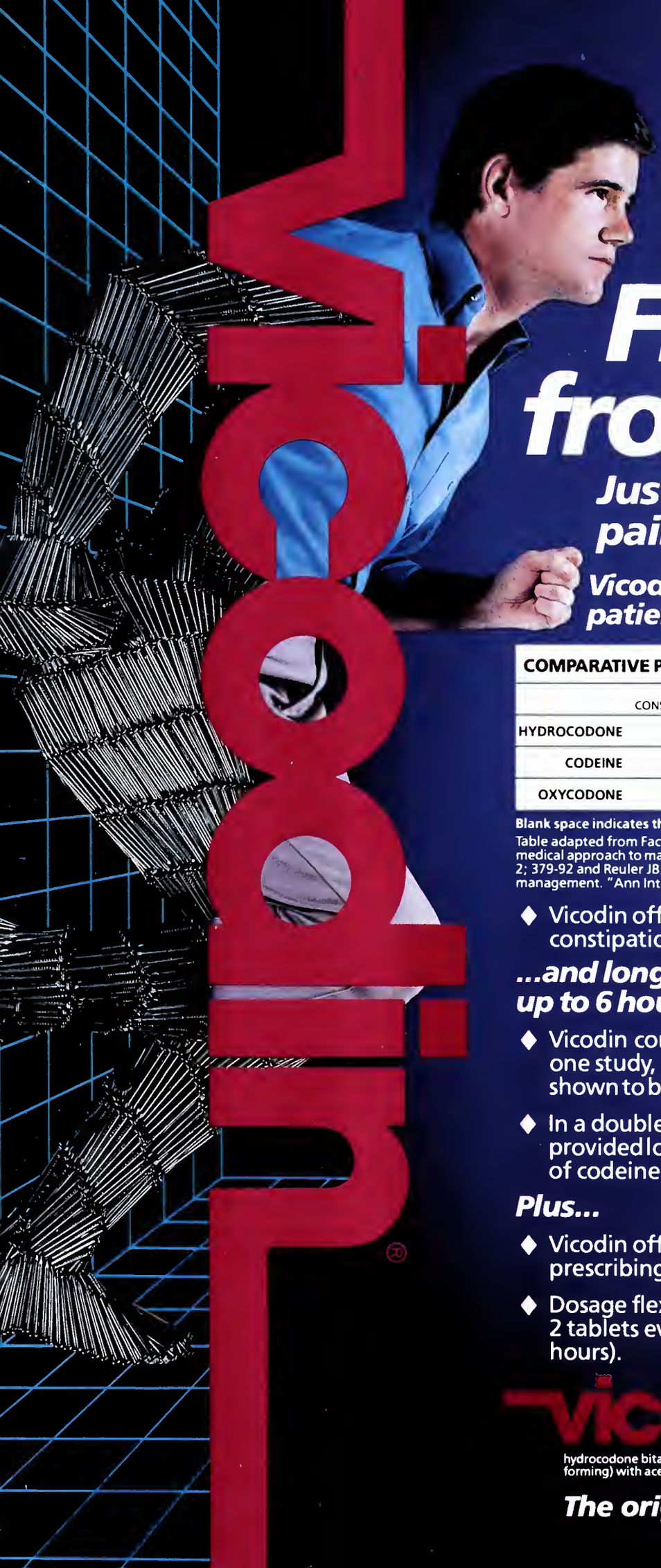
[072886R]
PA 8794 AMP

©1987, ELI LILLY AND COMPANY

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

700241



Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the origina hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. S68S

1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med,* 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

knoll®

BASF Group

© 1986, BASF K&F Corporation

5768/9-86 Printed in U.S.A.

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

In Hypertension*... When You Need to Conserve K+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).

Potassium-Sparing

DYAZIDE®

25 mg Hydrochlorothiazide/**50 mg** Triamterene/SKF

Over 20 Years of Confidence

The unique red and white Dyazide® capsule: Your assurance of SK&F quality.

a product of

SK&F CO.

Carolina, P.R. 00630

©SK&F Co., 1983

Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

Motrin® 800 mg TABLETS
ibuprofen

Extra strength
Convenience
Economy

Upjohn
A Century of Caring
1886·1986

©1986 The Upjohn Company

J-6138 January 19

VYMUTT J. GURURAJ, MD
DIANE E. KARTHER, MS

A comprehensive program of parent education and its evaluation

A multidisciplinary team of professionals designed a comprehensive parent education program and questionnaires to evaluate the program's effectiveness. Among topics offered to the 119 program participants were: adaptation to parenthood, normal growth and development, well child visit, accident prevention, prenatal influences on the child, common health problems, and nutrition. We developed questionnaires to measure participants' understanding of program lessons, to determine each participant's level of satisfaction, and to reveal parents' confidence in their child rearing abilities several months after the program had ended. The program described here offers a potentially effective approach to parent education and a methodology to evaluate the program's effectiveness.

In this age of rapid social change, where traditional parenting patterns have broken down, there is an ever-pressing need for parent education. Isolated by geographic mobility from traditional sources of education on parenting, or lacking the experience of assisting in raising their own siblings, parents of today must turn to new sources. Since both parents are also likely to be working, except for a short period when the infant and mother adapt to the new circumstances of birth, opportunities for meaningful contact have also decreased in many cases.

Though information on parenting is available from the pediatrician, apparently it is of rather short duration, averaging only about 1 1/2 minutes on any one visit (1). Consequently, it is likely that many new parents face the task of child rearing with a substantial deficit in the requisite experience. The literature suggests that few comprehensive programs on parenting are regularly available to accommodate this lack. In addition, not enough systematic experience has been gained with parenting programs to date to suggest what the content of such programs should be.

The effort we describe in this article attempted to determine the effectiveness of a comprehensive parenting program. The goals of the program described in this article included strengthening parental abilities to care for children, increasing parental self-confidence, increasing parents' knowledge of normal and abnormal child development, improving parental abilities to conduct observational and follow-up functions traditionally included in well-child examination sessions, obtaining wider participation of parents in preventive health care, and enabling parents to interface more effectively with the health care system.

Methods

The pediatrics department at Texas Tech University Health Sciences Center developed the program, sponsored by a grant from the Coordinating Board, the Texas College and University System.

Because the preliminary plans for course content included a broad range of topics related to infant care, numerous professionals were consulted about specific content ideas, needs of new parents, and curriculum materials. Included were staff from the departments of pediatrics, obstetrics and gynecology, nutrition, home and family life, and speech pathology and audiology. Additional persons contacted were prenatal class instructors, family relations specialists, public school teachers of pregnant teens, traffic safety education consultants, and staff from maternal and child health clinics. The resultant course content included seven topics: adapting to parenthood; normal growth and development; well child visit; accident prevention; parental influences on the child; common health problems; and nutrition.

The program format called for one two-hour session per week for seven weeks. A cross-disciplinary approach was used with a pediatrician, nurse practitioner, and child development specialist present at each session. They provided introductory remarks and served as principal preceptors. Additional speakers were pediatricians, nutritionists, an infant intervention program director, and family relations specialists. At least two speakers participated in each session.

Presentations were informal to encourage group discussion. Each session contained two major presentations, a question and answer period, and a short evaluation. In addition to audiovisual aids, several sessions included live demonstrations. To encourage attendance, parents were allowed to bring their children.

Informational packets were distributed to participants, thereby reinforcing and supplementing the discussion topic. These included self-checklists on mood and marital adjustment; developmental screening information; growth charts; information on infant hearing, development, accident prevention, and immunizations; a booklet on physical care; dental hygiene pamphlets; auto safety information; feeding and sterilization guides; and reading lists.

Participants for the program were recruited through newspaper articles, television and radio public service announcements, and mailings to medical practitioners and agencies within the community. The program was offered at no charge. Most of the participants registered by telephone. All sessions were conducted in a classroom in the medical school.

Evaluation methodology included two formative and two summative instruments. Participants'

Vymutt J. Gururaj, MD, Professor of Pediatrics, and Diane E. Karther, MS, formerly Behavioral Science Coordinator, Department of Pediatrics, Texas Tech University Health Sciences Center, School of Medicine, Lubbock, TX 79430. Send reprint requests to Dr Gururaj.

satisfaction with programs and speakers and the usefulness of materials and audiovisuals were assessed for individual sessions using a six-item Likert-type scale, the "End of Session Satisfaction Index." Space for comments was provided on the form, which required about ten minutes for completion. This form was given to each participant at the end of each evening session.

A multiple choice questionnaire, the "Content Knowledge Scale," was created to assess the comprehension level of each participant. This six-question instrument included questions on appropriate foods for a 12-month-old child, the causes of skin rashes, things parents can do to help their child learn, the best position for an infant safety seat, facts about immunizations, and factors that can cause husband-wife relationship breakdowns.

Summative evaluation was determined with the use of an "End of Program Satisfaction Index" and a follow-up questionnaire of ratings of course practicality and of performance activities learned from the class and applied to the children. The former was administered on the last class day or mailed to absent participants. Items included ratings on organization, content relevance, application to participants' needs, and skills of instructors. The follow-up questionnaire was sent to participants six to nine months after completion of the program, when the greatest number of expectant parents had delivered their babies. Results of this survey determined actual use of the program information. Sample items included ratings of program helpfulness, ratings of 16 topics from the course, a checklist of 16 activities to be implemented into practice, and questions on usefulness of the printed materials.

Results

Three groups of parents participated in the educational program. Group size ranged from 15 to 60 people. The majority of program participants were married couples, either expectant or with infants under 1 year of age. A small percentage of couples had older children. Age and educational background of the participants are presented in Fig 1.

The formative evaluation ratings from all three parent groups attending the program are shown in Fig 2. Results from the End of Session Satisfaction Index revealed high means for each of the seven sessions, with the sessions on accident prevention and parental influences receiving the highest ratings.

The End of Program Satisfaction Index evaluation ratings, shown in Fig 3, revealed high means for all

1. Characteristics of program participants (N = 119).

	Male (%)	Female (%)
A. Age		
Under 21 yrs	0	1
21–35 yrs	37	62
B. Education		
Less than high school	.8	—
High school	1.6	8.0
College, below baccalaureate	17.1	24.0
Baccalaureate	11.0	22.0
Graduate or professional	9.3	6.2

*3. End-of-Program Satisfaction Index means for all groups.**

Organization	4.78
Content relevancy	4.69
Effectiveness of printed material	4.85
Effectiveness of visual aids	4.71
Pertinence to parental needs	4.94
Difficulty level	4.73
Instructors' presentation skills	4.84
Instructors' personal qualities	4.84
Appropriateness of amount of information	4.75
Suitability of program length	4.75
Program management and integration	4.72
Additional learning	4.70
Enhancement of parenting abilities	4.69
Suitability of physical environment	4.72
Recommendation of course to others	4.92

* 1.00 = low, 5.00 = high.

*2. End-of-Session Satisfaction Index means for all groups.**

Items	Parenthood	Growth and Development	Well Child Visit	Accident Prevention	Parent Influences	Common Problems	Nutrition	Overall
1. Interest of information	4.23	4.32	4.58	4.63	4.56	4.53	4.44	4.47
2. Usefulness of materials	3.51	4.37	4.61	4.64	4.61	4.48	4.78	4.43
3. Effectiveness of leaders	4.30	4.51	4.50	4.64	4.68	4.65	4.02	4.47
4. New information	3.81	4.44	4.42	4.54	4.28	4.44	4.26	4.31
5. Usefulness of visual aids	3.98	4.41	4.09	4.60	4.14	4.20	4.01	4.20
6. Organization	4.46	4.37	4.45	4.62	4.67	4.26	4.03	4.38
Overall	4.04	4.42	4.46	4.62	4.62	4.44	4.26	4.39

* 1.00 = low; 5.00 = high.

dimensions measured. The means for content applicability for individual needs (4.94) and for recommendation of course to others (4.92) and the effectiveness of educational materials (4.85) were particularly high.

Fig 4 contains the content knowledge mean scores obtained by participants, all of which exceeded 85%. The mean scores reflecting participants' understanding in the area of accident prevention, common problems, growth and development, and well child supervision were particularly high. There was a range of 11.33 points indicating a high level of understanding of the content of each session.

Ratings of course practicality six to nine months after the termination of the program are presented in Fig 5. Each of the sessions involved a high rating for promotion of self-confidence, with growth and development receiving the highest mean. Overall, it appears the program was considered quite practical.

All of the course suggestions were reported to have been put into some degree of practical use, as shown in Fig 6. Eighty-one percent of the participants reported the purchase of an infant car seat as recommended. Seventy-nine percent of the participants were able to measure and record their child's growth on a standard growth chart, while 61% reported administering the Denver Developmental Screening Test. A large percentage of parents (81%) were able to check the hearing acuity of their children. While 27% of the parents reported practicing the Heimlich Maneuver, one parent reported successfully using this maneuver on his choking child.

Discussion

The data from our study suggest that the topics selected and the way they were presented represent a model for comprehensive parent education. There was overwhelming approval of the various topics presented in the program. Each topic received a uniformly high rating, with the topics of parental influences on the child and accident prevention receiving the highest ratings. These findings are consistent with those of Crase et al (2). They found that parents seek information on a broad set of topics, ranging from physical care and cognitive stimulation in young children to promoting independence and family communication in older children. Expectant parents in this study expressed the greatest need for information. Their concerns centered around child development, prevention and treatment of illness, physical care of the newborn, toy selection, and accident prevention. The parental interest in the various areas of general pediatrics, as expressed by our participants, is highly compatible with the emphasis pediatric care providers place on these very same areas.

The effectiveness of any parent program is always a difficult dimension to study. It is not always possible to determine in unequivocal terms the benefits derived from an educational program. Despite this, it is the feeling of many that efforts in parent education, particularly as it pertains to some important health problems, must continue (3). A variety of educational approaches have been advocated with respect to a few specific areas of health concerns. A few have been evaluated in terms of their effectiveness (4).

Our study examined this issue of program effectiveness in several ways, using a combination of subjective self-report criteria and objective measures of knowledge gained through the program. The findings from these approaches of evaluation of the program suggest a generally high level of effectiveness.

*4. Content knowledge mean scores for all groups per session.**

1. Parenthood	88.34
2. Growth & development	94.34
3. Well child visit	94.00
4. Accident prevention	98.00
5. Parent influences	86.67
6. Common problems	95.67
7. Nutrition	86.67

*Based on a 100 point scale.

*5. Rating of course practicality six to nine months after program.**

Rating of topics promoting self-confidence:	
Parenthood	3.77
Growth and development	4.33
Well child visit	4.22
Accident prevention	4.19
Parent influences	3.43
Common problems	3.93
Nutrition	4.15
Total program helpfulness	4.15

*1.00 = low; 5.00 = high.

6. Percentage of parents who performed course activities six to nine months following program.

Growth measurements	77
Noted Apgar score	58
Used Deaver Developmental Screening Test	62
Checked baby's hearing	81
Used activities to help baby learn	58
Took baby's temperature	73
Followed bathing procedures	69
Recognized signs of illness	31
Accident-proofed home	54
Practiced the Heimlich maneuver (on baby or other)	27
Used well-baby checklist during physician visit	27
Stocked medicine cabinet	31
Purchased an infant safety seat	81
Followed feeding schedule from class	38
Begun immunizations	54
Read a book from reading list	23
Used printed materials from class	96
Recommended the class to others	85

Participants viewed the program favorably, learned the content to very acceptable levels, felt that their confidence as parents was improved by the program, and reported that they were able to put much of what they had learned to use in practical situations at home.

This was not meant in any way to be a definitive evaluation of the program. The evaluation did not include a method to observe parents' use of skills directly. This would be a fruitful area for further study in view of the fact that these skills are relatively simple to learn and administer. Studies already have shown health personnel other than physicians (eg, nurse practitioners) can learn and effectively apply these skills (5,6). Therefore, it would be a logical next step to teach parents themselves so that they too can apply these skills and thus become more involved with the physician in providing health supervision of children.

Also, it is possible that many of the gains in knowledge and skills that we attribute to the program might have occurred in lieu of the program experience, for example, through reading magazines and paperback books. Future work with the program should expand the evaluation design to include more detailed pretesting, segmentation of the population into groups with different educational backgrounds, and appropriate nontreatment groups. Only then will be known the full effects of the program and for whom it is more effective.

Finally, despite the controversy that now exists concerning the effectiveness of parent education (3,7–10), we agree with Pless (3) that we should do our best as educators. Further, efforts must also continue to develop different methodological approaches that can be evaluated. For the present, the program described offers a potentially effective approach to parent education, one which should continue in use and development as this important issue is explored.

REFERENCES

1. Reisinger KS, Bires JS: Anticipatory guidance in pediatric practice. Pediatrics 66(6):889–892, 1980.

2. Crase S, Carlson C, Kontos S: Parent education needs and sources as perceived by parents. Home Econ Res J 9:221, 1981.

3. Pless IB: Accident prevention and health education: back to the drawing board? Pediatrics 62(3):431–435, 1978.

4. Chamberlin RW, Szumowski EK, Zastowny TR: An evaluation of efforts to educate mothers about child development in pediatric office practices. Am J Public Health 69(9):875–886, 1979.

5. Schiff DW, Fraser CH, Walters HL: The pediatric nurse practitioner in the office of pediatricians in private practice. Pediatrics 44(1):62–68, 1969.

6. Silver HK, Ott JE, Dungy CI, et al: Assessment and evaluation of child health associates. Pediatrics 67(1):47–52, 1981.

7. Allen DB, Bergman AB: Social learning approaches to health education: utilization of infant auto restraint devices. Pediatrics 58(3):323–328, 1976.

8. Kanthor HA: Car safety for infants: effectiveness of prenatal counseling. Pediatrics 58(3):320–322, 1976.

9. Scherz RG: Restraint systems for the prevention of injury to children in automobile accidents. Am J Public Health 66(5):451–456, 1976.

10. Miller JR, Pless IB: Child automobile restraints: evaluation of health education. Pediatrics 59(6):907–911, 1977.

ACKNOWLEDGMENTS

This work was supported by a grant from the Coordinating Board, Texas College and University System. We thank Robert O'Reilly, PhD, for his review of the evaluation design of the study and Zandra Akins for her assistance in conducting the study.

DONALD L. BRICKER, MD

D. VINCENT RITTMANN, JR, MD

Reoperation for failed myocardial revascularization procedures

Reoperation for a failed myocardial revascularization procedure is one of the most technically demanding operations in the cardiac surgeon's repertoire. The operation is inherently more difficult, the patients are older and almost inevitably have sustained additional adverse cardiac events leading to decreased left ventricular function. During the past 15 years, the senior author has reoperated on 232 patients, with a mortality of 4.3%, about double that for primary revascularizations. Principles that have evolved from this experience include excision of old vein grafts, regardless of angiographic appearance, reanastomosis of new grafts at the site of the old distal anastomosis, utilization of extended vein patch angioplasty, and use of the internal mammary artery, when feasible. Although results cannot logically be expected to equal those of primary revascularization, they are most satisfactory. In view of this fact, the importance of continuing careful follow-up of the post-myocardial revascularization patient is stressed.

It is axiomatic that the surgeon's efforts at myocardial revascularization have little effect on the basic disease process—atherosclerotic occlusion of the coronary arteries. Even optimum medical therapy with high patient compliance may have little effect. A significant percentage of patients having myocardial revascularization procedures in their fourth to sixth decades can be expected to require consideration for repeat revascularization in later life, either because of graft attrition or progression of disease in native coronary arteries.

Unfortunately, repeat operations for myocardial revascularization are, in the authors' opinions, the most difficult technical procedures the cardiac surgeon is called upon to perform. The patient population is older, the number of adverse cardiac events invariably greater, and the operative procedure requires more time, diligence, and expertise. It would not be logical, therefore, to assume that repeat procedures can be accomplished with the mortality and morbidity equivalent to those of primary revascularization. A new set of principles has evolved, with technical considerations that have minimized unsatisfactory results, and in this paper we delineate those as applied to our series. The results justify a continuing aggressive approach to the management of coronary artery disease and illustrate the importance of careful long-term follow-up.

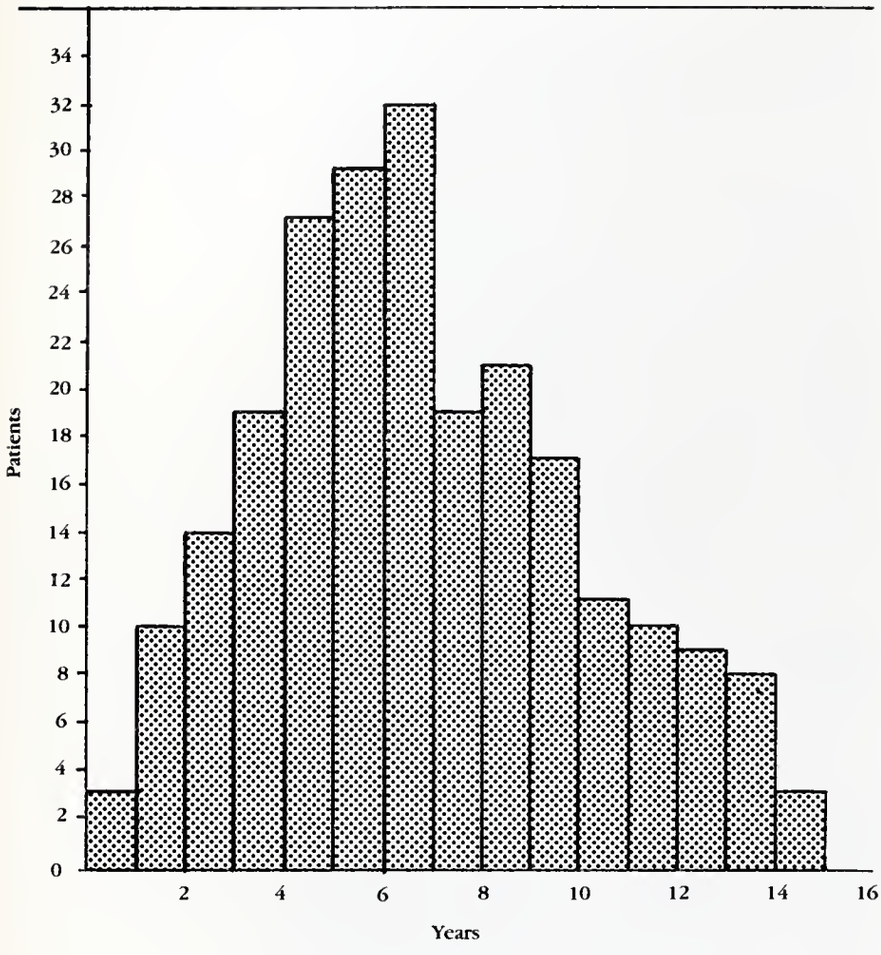
Fig 1 shows the numbers of patients and numbers of years since initial surgery. Virtually all of the patients had been under the continuing care of their family physicians or cardiologists, and were referred for repeat angiography because of recurrent angina pectoris, a failed exercise test, or a recent myocardial infarction. A significant number of patients consulted their physicians because of a loss of sense of well-being or increasing fatigue, which symptoms, they stated, were identical to those preceding their initial revascularization procedure. Angiographic findings in these patients included total graft occlusion, significant graft stenosis, progression of stenosis in native coronary arteries, or combinations of these. The indications for reoperation in this series, then, were identical to those of the initial procedures: either recurrent symptoms refractory to medical management, unstable angina, or angiographic demonstration of extremely threatening occlusive disease, such as left main coronary artery stenosis. This is in marked contrast to the series of Loop and associates, in which the most common cause for repeat revascularization was initial incomplete revascularization (1).

Donald L. Bricker, MD, and D. Vincent Rittmann, Jr, MD, Southwestern Cardiovascular Surgical Associates, 3420 22nd Place, Lubbock, TX 79410.

Operative techniques and preparations

All patients were typed and crossmatched for six units of whole blood or packed red blood cells, fresh frozen plasma, and eight units of platelets, the latter because of the large number of patients who were taking antiplatelet drugs. Anesthesia was induced with Fentanyl, and a Swan-Ganz catheter was placed. Median sternotomy was accomplished by dividing the sternum with a power saw in the manner of a primary procedure, but the undersurface of the sternum was freed by means of a blunt clamp prior to division. Total cardiopulmonary bypass with caval occlusion was instituted, with arterial return by the ascending aorta or transverse arch or femoral artery, if the aortic areas appeared to be heavily calcified or lacking in spatial requirements. Bypass was initiated by most diligently avoiding excessive cardiac manipulation, applying a "no-touch" technique to the grafts themselves. Hypothermia at 28° was instituted routinely in the later cases in the series. Cardiac arrest was accomplished by using cold crystalloid potassium cardioplegic solution and the heart was further cooled with saline slush. The grafts were ligated in most instances immediately following cardiac arrest. Exceptions were in cases where no native coronary arteries were patent proximally, and the risk of embolizing loose debris was accepted for delivery of cardioplegic solution, until this could be delivered through the grafts after completion of the distal anastomosis. New grafts, either vein or internal mammary artery, were applied directly to the old site of graft placement when patent grafts existed, extending the coronary arteriotomy proximally and distally to apply the vein graft as an extended vein patch angioplasty, thus assuring proximal and distal perfusion. Old grafts were rarely left intact and then only when their gross appearance correlated with angiographic appearance so com-

1. Operative interval from original revascularization.



pletely that the surgeon had absolute confidence in their integrity. After all vein bypasses had been constructed and old grafts removed, rewarming was begun and the aortic cross clamp removed. Proximal anastomoses were constructed to the old aortic site or new aortotomies, as dictated by spatial requirements. Decannulation was accomplished in a routine fashion and no effort was made to close the pericardium. Drainage was effected by mediastinal sump drains or two-bottle suction apparatus, if either pleural cavity was opened. Cephalosporin-oxacillin antibiotic therapy was begun intravenously at the initiation of the surgical procedure, with cephalosporin-kanamycin irrigation during the procedure. Antibiotics were continued until all invasive lines were discontinued, usually two to three days postoperatively. The patients were routinely left on volume ventilatory support 12 to 18 hours postoperatively.

Results

The patient population included 221 men and 11 women, whose average age was 58 years. An average of 2.2 grafts were performed per patient. The operative mortality is detailed in Fig 2 and compares with that in other reported series (1–8). Myocardial failure accounted for six deaths and myocardial infarction for three, while the only death in a patient with a normal ventricle occurred because of a complication related to the use of a Swan-Ganz catheter (pulmonary artery rupture). As has been universally experienced, the most important determinant of survival was preoperative ventricular function (Fig 3). Complications are shown in Fig 4. Twenty-five patients required pharmacologic or intra-aortic balloon pump support, or both. Perioperative blood usage was 2.53 units per patient, contrasting with 2.03 units in patients undergoing primary revascularization.

Discussion

Although mortality was expectedly higher than that for primary revascularization procedures, the methodology elucidated has largely prevented intra- and perioperative technical catastrophes. Dividing the sternum was easily accomplished, after freeing the retrosternal space bluntly, and no right ventriculorrhaphies were necessary. In one case, where a graft placed elsewhere crossed the anterior mediastinum from right to left, the graft was divided, necessitating rapid activity, since that graft was the only source of myocardial blood supply. This might have been prevented by proper angiographic interpretation preoperatively. In that regard, it cannot be stressed too emphatically that the interpretation of the state of the vein grafts, as reflected by their angiographic appearance, is often seriously in error. While recently placed (1–3 years) vein grafts may

indeed be free of disease, older grafts invariably have loose lipid deposits and thrombotic accumulations which are easily dislodged by excessive manipulation, with disastrous embolic consequences. While it is not thought that the technique of Grondin and associates (9), who immediately ligate all grafts after induction of cardiopulmonary bypass, is necessary in all cases, that direction is favored. One can be sure that disaster is imminent when, upon opening the coronary artery, a flow of particulate debris issues from the arteriotomy, as occurred in several of our early cases. The histologic studies of Keon and associates (1) well document the role of atheroembolism in the etiology of perioperative myocardial infarction. Figs 5–8 show the discrepancy between angiographic and gross appearance of vein grafts. This line of reasoning also supports removal of the graft from the old anastomotic site, for it is remarkable how often the suture line is represented by an accumulation of shaggy, atherosclerotic, thrombotic debris, which protrudes into the lumen of the coronary artery. Because of the need to patch over these areas, the internal mammary artery, normally the preferred conduit, was used sparingly in this series, since its size did not lend itself well to patch graft angioplasty.

Postoperative bleeding was not a problem, and while total blood usage was greater because of the raw, oozing surface area, reoperation for bleeding was not increased. It is technically difficult to assess the degree of bleeding at the operating table because of the continued ooze. A philosophy was developed in this series, wherein great effort was not made to control this raw surface bleeding, as approximation of tissue was the best hemostatic agent. Therefore, closure was effected as soon as all the cardiotomy and grafting sites were known to be hemostatic. We did not encounter difficulty with failure to locate vessels for grafting, but dense adhesion formation and scarring made the process cumbersome. The number of grafts performed, 2.2 per patient, compared closely with that of primary revascularization. Currently, we average more than three grafts per patients, but because of the increased number of akinetic areas secondary to infarction in the reoperative group, this philosophy was not reflected. It is not our policy to revascularize nonviable myocardium. We began to use systemic hypothermia during the last half of the series, because of growing concern over adequacy of myocardial protection in these cases, which, obviously, require more cardiac arrest time. We noted no significant change in results however. Infection was limited to a single case not requiring extensive therapy, in a patient with chronic lymphatic leukemia. Postoperative recovery periods were slightly prolonged, consistent with the decreased ventricular function of these patients as a group. It ap-

2. Aortocoronary bypasses, reoperations.

Procedure	No. Pts.	Deaths	%
Single bypass	53	0	0.0
Double bypass	108	5	4.6
Triple bypass	51	2	3.9
Quadruple or more bypass	20	3	15.0
Total	232	10	4.3

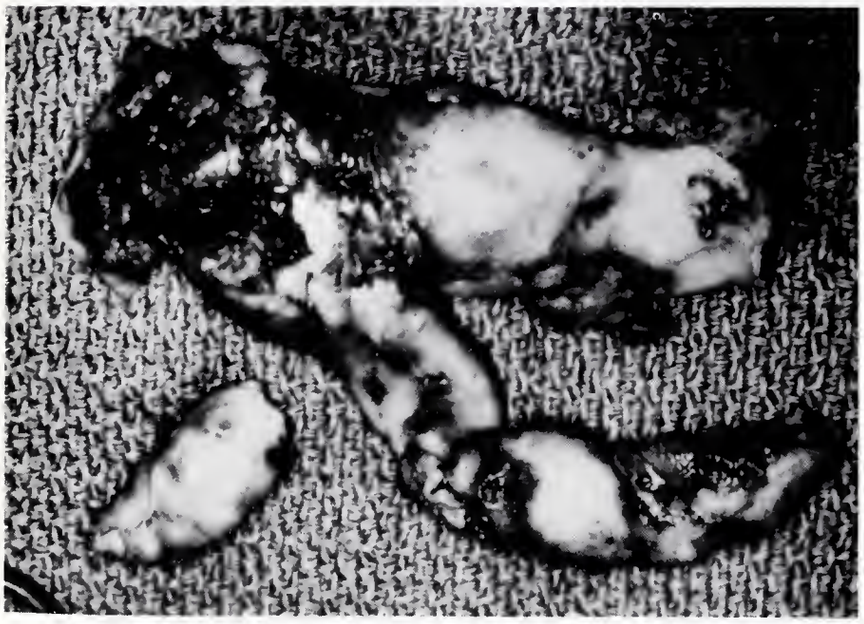
3. Preoperative condition of ventricle.

Ventricle	No. Pts.	Deaths	%
Good	64	1	1.6
Fair	109	3	2.8
Poor	59	6	10.2
Total	232	10	4.3

4. Complications.

Tamponade	9
Depression	5
Pulmonary edema	5
Prolonged ventilation	5
Pulmonary embolus	2
Postoperative MI	2
Gastrointestinal bleeding	2
Infection	1
Total (13.3%)	31

25 patients required pharmacologic and/or intra-aortic balloon pump support.



5,6. Angiographic appearance of the graft is reflected by the gross appearance of resected specimen.

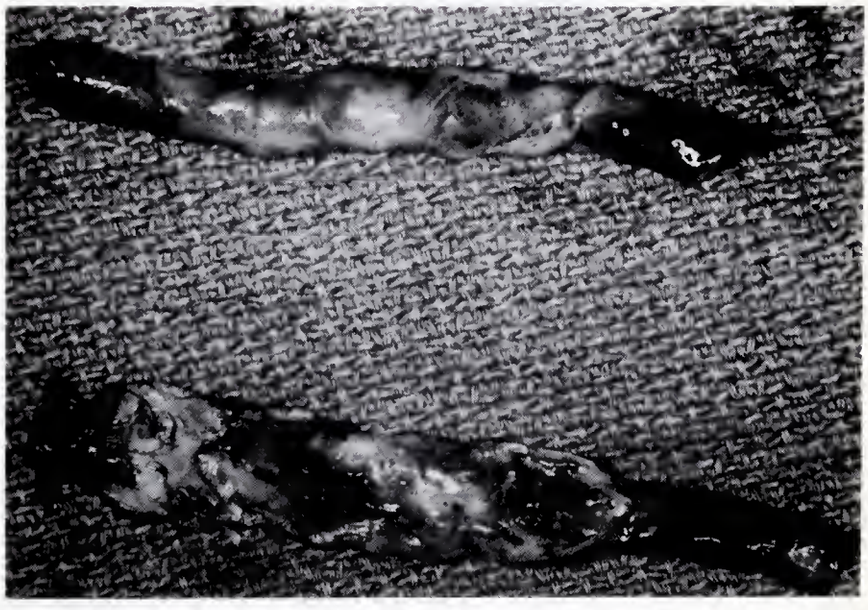
pears that no matter what other yardstick is applied, the essential determinant of morbidity and mortality remains the level of ventricular performance. As Fig 3 shows, 59 (25.4%) of these patients had poor ventricular performance preoperatively. This contrasts to 16% of our patients who underwent initial revascularization procedures. It was this group that required pharmacologic and/or intra-aortic balloon pump support (10.8% of patient population) and accounted for 60% of the deaths in this series.

It is of considerable interest that the average age of these patients, 58 years, is less than the age of those in our series presenting for initial revascularization. In 1972, these patients averaged 62 years of age and in 1985, they averaged 66 years of age. Since the majority of our reoperations occurred four to eight years after the primary procedure, the fact is clear that this group of patients suffered the symptomatic onset of their disease process earlier in life than the majority of our patients. The disease entity involved in virtually all of our reoperation cases was progressive arteriosclerosis. We have seen only two cases of graft failure due to fibrous intimal proliferation. The reoperation group has not been subjected to detailed statistical analysis of risk factors associated with arteriosclerotic heart disease, but it is our impression that a higher number of the usual risk factors, such as lipid disorders, hypertension, obesity, familial traits, and smoking were present in most. We have not analyzed in detail the influence of patient compliance with medications, diet, exercise, or smoking. This is extremely subjective in any case relying on absolute patient veracity. We do know that the overwhelming majority of these patients were still smoking, but since at least 60% of the patients in our series, as a whole, continue to smoke or use tobacco in some form, this is of doubtful statistical validity in predicting early failure.

The most important message that these data impart is the necessity of continuing careful medical management and observation of the patient following coronary bypass, since effective reoperative therapy is available when the need is documented. The degree of patient acceptance of reoperation has been very gratifying, with most patients expressing relief that the condition was still operable and anticipating a return to the sense of well-being and relief of symptoms they experienced following their initial revascularization. These procedures will occupy an increasing portion of the cardiac surgeon's effort.

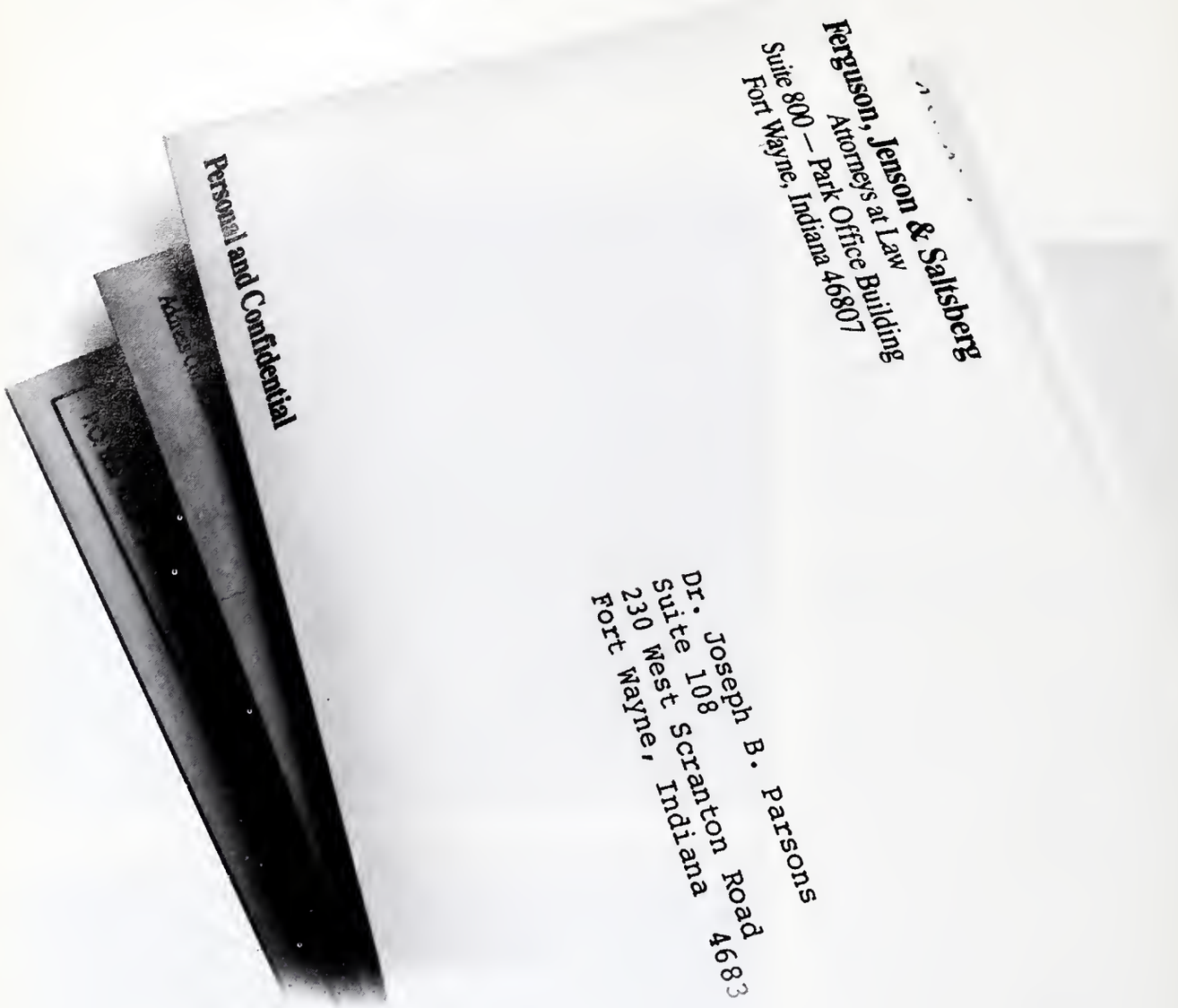
REFERENCES

1. Loop FD, Cosgrove DM, Kramer JR, et al: Late clinical and arteriographic results in 500 coronary artery reoperations. J Thorac Cardiovasc Surg 81(5):675–685, 1981.
2. Allen RH, Stinson EB, Oyer PE, et al: Predictive variables in reoperation for coronary artery disease. J Thorac Cardiovasc Surg 75(2):186–192, 1978.
3. Culliford AT, Girdwood RW, Isom OW, et al: Angina following myocardial revascularization. Does time of recurrence predict etiology and influence results of operation? J Thorac Cardiovasc Surg 77(6):889–895, 1979.
4. Reul GJ Jr, Cooley DA, Ott DA, et al: Reoperation for recurrent coronary artery disease: causes, indications, and results in 168 patients. Arch Surg 114(11):1269–1275, 1979.
5. Schaff HV, Orszulak TZ, Gersh BJ, et al: The morbidity and mortality of reoperation for coronary artery disease and analysis of late results with the use of actuarial estimate of event-free interval. J Thorac Cardiovasc Surg 85(4):508–515, 1983.
6. Foster ED, Fisher LD, Kaiser GC, et al: Comparison of operative mortality and morbidity for initial and repeat coronary artery bypass grafting: the Coronary Artery Surgery Study (CASS) registry experience. Ann Thorac Surg 38(6):563–570, 1984.
7. Thomas CS, Alford WC, Burrus GR, et al: Results of reoperation for failed aortocoronary bypass grafts. Arch Surg 111(11):1210–1213, 1976.
8. Qazi A, Garcia JM, Mispireta LA, et al: Reoperation for coronary artery disease. Ann Thorac Surg 32(1):16–18, 1981.
9. Grondin CM, Pomar JL, Hebert Y, et al: Reoperation in patients with patent atherosclerotic coronary vein grafts. J Thorac Cardiovasc Surg 87(3):379–385, 1984.
10. Keon WJ, Heggtveit HH, Leduc J: Perioperative myocardial infarction caused by atheroembolism. J Thorac Cardiovasc Surg 84(6):849–855, 1982.



7,8. Although the graft appears smooth angiographically, the resected specimen reveals accumulation of thrombotic and atherosclerotic material.

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

HARRY J. PARKER, PHD

FONG CHAN, PHD

Prestige ratings of allied health professions

We analyzed the prestige ratings of 13 allied health professions as assigned by four types of health care providers: physicians, nurses, physical therapists, and occupational therapists. This study was prompted by two factors: (1) The literature on occupational prestige does not include allied health professions, and (2) this same literature indicates that there is consistency in the ranking hierarchy across all manner of groups, cultures, and societies. Findings concur with the occupational prestige literature showing a high correlation in the rankings by the four health care providers. Prestige rating and ranking by physicians and nurses were not significantly different from one another or from that of occupational and physical therapists. Certain allied health occupations showed disparities in ratings and ranking among the four health care providers, and some explanations are advanced.

Health care providers usually regard peers, rather than the public, as the most credible judges of their performance. When occupational prestige or social status is the focus, anyone can judge without revealing the variables influencing the judgment (1). Occupational prestige is the major means of identifying the social status of individuals within a social system. Prestige has replaced ancestry, religious office, or political affiliation as the status-fixing entity in our society (2). Isaacson defined occupational prestige as "the esteem or social status accorded to an occupation by the general population" (3). Key factors in prestige are training, education, knowledge required, monetary rewards, and the nature of the work (eg, authority, responsibility). These factors affect the prestige rating.

The National Opinion Research Center (NORC) has performed prestige studies and developed a scale and list of 90 representative occupations (4). Cross-cultural and subgroup studies in the US and foreign countries have produced stability over time (50 years) and a level of agreement regarding prestige of those occupations (5–7). Trieman (1) summarized the literature noting that, on average, people in all walks of life view the occupational prestige hierarchy in the same way. With minor exceptions, there is extraordinary consensus through societies regarding the relative prestige of an occupation.

Little research on prestige of allied health professions has been done. Prestige of various medical specialties along with a few allied health professions has been evaluated (8). General studies dealing with conflict resolution among physicians and nurses have observed "social status", image, and media portrayal as critical features (9,10). Parker and Chan (11,12), examining stereotypes that physical and occupational therapists used for one another, used a list of hospital-based allied health occupations for prestige ratings. These participants anecdotally commented that physicians' and nurses' ratings should be sought since they had more encounters with people in the occupations, and their responses would be a type of baseline for comparison.

The purpose of this study was to analyze the ratings/rankings by physicians, nurses, physical therapists, and occuational therapists and compare the findings with available studies.

Harry J. Parker, PhD, Professor, Departments of Physical Medicine and Rehabilitation, Psychiatry, and Rehabilitation Science; and Fong Chan, PhD, Assistant Professor, Department of Rehabilitation Science, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235–9088.

Materials and methods

PARTICIPANTS

Forty-eight physical therapists (licensed), 56 occupational therapists (certified), 71 registered nurses (licensed), and 95 physicians (licensed) volunteered to participate in the study. This represented nearly all of the staff in the occupational and physical therapy services in five large, urban general and specialty hospitals in one city. Physical therapists, all women, had an average of 7.2 years (SD = 7.0) of work experience, while occupational therapists, 94% women, had a mean of 6.1 years (SD = 5.6) of experience. Nurses were all volunteers attending their monthly professional association meetings in two large cities. The nurses, 96% of whom were female, had an average of 16 years of experience (SD = 9.5). They spent 63% of their time in hospital-based care, 25% in teaching/instruction, and the rest in clinics, offices, and so forth. Physician volunteers were surgery residents in a major teaching hospital (25%), and private practitioners attending their county medical society meeting in two large urban counties (75%). The majority were primary care physicians; they had 15.12 mean years of work experience since receiving their degrees (SD = 13.2), and 89% were men.

INSTRUMENT

The Allied Health Professions Prestige Rating (AHPPR) scale was designed to study the prestige of 13 allied health occupations. These occupations, arranged in alphabetical order, included the official initials designating credential level after each title usually found on identification badges/name plates. A blank to the right of each occupation was provided for the assigned value rating. The directions to the respondent were: "Please give each occupation a value (number) that best gives your own personal opinion of the social standing that each occupation has." The scoring or rating of each occupation was identical to the NORC research (5). The rating categories of each occupation were: 1 = poor, 2 = somewhat below average, 3 = average, 4 = good, 5 = excellent, and X = don't know. Preserving this scoring system permits these data to be compared with that for other nonhealth occupa-

tions when this system is used. Each participant's score or rating of each occupation was converted to a percentage in each category. The five response categories were converted to a percent base of 100. The percentage in each response category was multiplied by its assigned value. This sum was finally divided by five to obtain a single index for each occupation. The distribution of scores had a maximum value of 100 and a minimum of 20. The "don't know" category was not used in calculating the composite prestige score. Five minutes was the average time for completion of the scale. All data were collected in the work setting of the physical therapists and occupational therapists involved, with separate administrations for each profession. Nurses and physicians participated at their professional meetings or work settings.

Validity of the AHPPR scale and its occupations was considered to have face validity, just as the occupational titles did in the NORC studies (6). Reliability of the AHPPR scale for the occupational therapists', physical therapists', nurses', and physicians' sample was 0.71, 0.79, .83, and .80 respectively. Cronbach's alpha was used as the internal consistency reliability measure. These values were considered adequate for purposes of this study.

Results

Figs 1 and 2 provide the scoring categories, percentage of response in each category, prestige scores, and ranking for the 13 allied health professions identified by the four categories of health care providers.

Physical therapists and occupational therapists gave similar rankings (Fig 1). A correlation of .83 (Spearman rho, $p < .01$) supports this observation. Comparing nurses' rankings with physical therapists' rankings, we found that the medical records administrator was ranked more favorably by nurses (fifth), while physical therapists ranked this occupation 11th. Registered dietitian, ranked first by nurses, was ranked eighth by physical therapists, a significant diversity. For the remainder of the 13 allied health professions, the differences in assignments by nurses and physical therapists were within two to three ranks. The correlation between nurses' and physical therapists' ranking was .69 (Spearman rho, $p < .01$), indicating a good deal of similarity in ranks.

Nurses' and occupational therapists' ranking for registered dietitian differed: nurses ranked them first, while occupational therapists ranked them seventh. Nurses ranked physician assistant ninth, while

1. Scoring categories, percentages, prestige scores, and ranks of physical and occupational therapists for 13 allied health occupations.

	Physical Therapists N = 48								Occupational Therapists n = 56							
Occupations	Poor 1	SB Av 2	Av 3	Good 4	Exc 5	DK X	**Prestige Score**	**Rank**	Poor 1	SB Av 2	Av 3	Good 4	Exc 5	DK X	**Prestige Score**	**Rank**
Audiologist CCC-A	.0	2.3	34.8	55.8	6.9	10.4	**73.3**	**4**	.0	3.8	17.3	53.8	25.0	7.1	**79.9**	**3**
Dental Hygienist RDH	.0	14.8	48.9	29.7	6.3	2.1	**65.3**	**10**	.0	28.5	39.2	30.3	1.7	.0	**60.9**	**13**
Registered Dietitian	.0	6.2	54.1	37.5	2.0	.0	**66.0**	**8**	.0	10.9	36.3	45.4	7.2	1.8	**70.0**	**7**
Medical Records Administrator RRA	2.1	14.8	42.5	38.2	2.1	2.1	**64.5**	**11**	.0	13.4	46.1	36.5	3.8	.0	**67.3**	**8**
Medical Technologist MT(ASCP)	.0	13.0	60.8	23.9	2.1	4.2	**62.9**	**12**	.0	13.4	46.1	36.5	3.8	7.1	**66.0**	**11**
Occupational Therapist OTR	.0	.0	45.8	47.9	6.2	.0	**72.0**	**5**	.0	3.5	26.7	51.7	17.8	.0	**76.6**	**4**
Physical Therapist LPT	.0	.0	12.5	66.6	20.8	.0	**81.6**	**1**	.0	.0	5.3	64.2	30.3	.0	**84.8**	**1**
Physician Assistant PA-C	2.2	13.3	37.7	40.0	6.6	6.3	**67.0**	**7**	.0	5.7	30.7	48.0	15.3	7.1	**74.4**	**5**
Radiological Technologist RT	4.1	31.2	37.5	22.9	4.1	.0	**58.2**	**13**	1.8	20.0	45.4	30.9	1.8	1.8	**62.1**	**12**
Rehabilitation Counselor CRC	.0	6.5	50.0	36.9	6.5	4.2	**68.6**	**6**	.0	11.3	47.1	39.6	1.8	5.4	**66.3**	**10**
Respiratory Therapist CRTT	2.0	14.5	37.5	39.5	6.2	.0	**66.5**	**9**	.0	9.2	51.8	31.4	7.4	3.6	**67.3**	**9**
Social Worker (MSW)	.0	8.3	29.1	45.8	16.6	.0	**74.0**	**3**	.0	10.7	33.9	42.8	12.5	.0	**71.4**	**6**
Speech Pathologist CCC-SP	.0	.0	23.4	55.3	21.2	2.1	**79.5**	**2**	.0	.0	17.8	62.5	19.6	.0	**80.3**	**2**

Abbreviations: SBAv = Somewhat below average. Av = Average. Exc = Excellent. DK = Don't know.

occupational therapists ranked them fifth. All other allied health professions differed by two to three ranks. Nurses' and occupational therapists' ranks correlated .71 (Spearman rho, $p < .01$), essentially the same level of similarity as that of nurses and physical therapists.

Physicians (Fig 2) were quite similar to the other three health care providers in ranks for audiologist, dental hygienist, physical therapist, radiologic technologist, speech pathologist, occupational therapists, rehabilitation counselor, respiratory therapist, and social worker.

Physicians ranked registered dietitian as sixth, while physical therapists and occupational therapists ranked them eighth and seventh, respectively. Nurses differed from the other providers by ranking registered dietitian number one. Physicians ranked medical records administrator 13th, while occupational therapists were more favorable (eighth) than physical therapists (11th). Nurses ranked medical records administrators as fifth.

As a group, physicians gave more favorable ranks to medical technologists (seventh), while the physical therapists, occupational therapists, and nurses all ranked them tenth or lower. Physicians ranked physician assistants fourth, while occupational therapists rated them fifth, nurses ninth, and physical therapists seventh.

Because the rankings of the 13 allied health professions appeared to be relatively similar among the four groups of health care providers, a Kendall's coefficient of concordance (W) was computed to be .80, ($p < .01$) (13). These four providers' rankings were relatively similar and not disparate overall.

Discussion

While "don't know" was not part of the scoring, or part of the prestige score, the average (all 13 professions) among all four providers was quite similar: physical therapists = 2.4%, occupational therapists = 2.6%, nurses = 2.7%, and physicians = 2.7%. Physical therapists used "don't know" prominently for audiologist, as did occupational therapists, who also included an equal designation for medical technologist and physician assistant. For nurses and physicians, the rehabilitation counselor was accorded obvious "don't know". The less than 3% overall "don't know" designations by the raters suggests the assigned rating was an expression of feeling and judgement with limited uncertainty.

The "poor" rating was used sparingly, with physical therapists principally rating radiologic technologists, as did occupational therapists, the latter only nominally. Nurses used "poor" specifically with dental hygienists, and physicians cited medical

2. Scoring categories, percentages, prestige scores, and ranks of nurses and physicians for 13 allied health occupations.

	Nurses N = 71								Physicians N = 95							
Occupations	Poor 1	SB Av 2	Av 3	Good 4	Exc 5	DK X	Prestige Score	Rank	Poor 1	SB Av 2	Av 3	Good 4	Exc 5	DK X	Prestige Score	Rank
Audiologist CCC-A	1.6	4.8	38.9	48.4	6.5	9	70.6	5.5	.0	4.7	43.5	42.4	9.4	10	71.3	5
Dental Hygienist RDH	4.4	13.0	47.8	31.9	2.6	2	63.2	11	1.1	16.1	40.9	34.3	7.5	2	66.2	10
Registered Dietitian	.0	1.4	25.4	53.5	19.7	.0	78.3	1	2.1	2.1	45.3	44.2	6.3	.0	70.1	6
Medical Records Administrator RRA	.0	10.3	39.7	36.8	13.2	3	70.6	5.5	5.4	18.5	47.8	19.6	8.7	3	65.1	13
Medical Technologist MT(ASCP)	.0	12.9	55.7	28.6	2.9	1	64.3	10	.0	11.6	46.3	25.3	16.8	.0	69.5	7
Occupational Therapist OTR	.0	5.7	48.6	34.3	11.4	1	70.3	7	1.1	3.2	48.9	42.6	4.3	1	69.1	8
Physical Therapist LPT	.0	5.6	28.5	52.1	14.1	.0	74.9	3.5	.0	5.3	39.0	41.1	14.7	.0	73.1	3
Physician Assistant PA-C	3.1	12.3	35.4	36.9	12.3	6	68.6	9	2.1	8.5	27.7	50.0	11.7	1	72.1	4
Radiological Technologist RT	1.5	30.4	52.2	11.6	4.4	2	57.4	13	1.1	15.4	50.6	28.6	4.4	4	64.0	11
Rehabilitation Counselor	.0	8.3	45.0	41.7	5.0	11	68.7	8	2.4	4.8	54.2	34.9	3.6	12	66.5	9
Respiratory Therapist CRTT	2.9	18.6	50.0	24.3	4.3	1	61.7	12	2.1	16.8	49.0	26.6	6.4	1	63.8	12
Social Worker (MSW)	1.4	8.5	23.9	46.5	19.7	.0	74.9	3.5	1.1	7.5	30.9	45.7	14.9	1	73.2	2
Speech Pathologist CCC-SP	.0	4.4	26.9	49.2	19.4	4	76.7	2	.0	1.1	35.6	48.9	14.4	5	75.0	1

Abbreviations: SBAv = Somewhat below average. Av = Average. Exc = Excellent. DK = Don't know.

records administrators. "Excellent" was used by physicians for medical technologists, while nurses cited registered dietitians and social workers equally. Physical therapists identified themselves with their highest rating, as did the occupational therapists.

In summary, the four groups of raters had a great deal in common with the ratings they assigned and the relative ranks resulting for the 13 allied health professions. This similarity concurs with the literature on prestige occupations (1,8). Any differences among the four groups were expected according to the literature. An overall hierarchy would show that speech pathologist, physical therapist, social worker, and audiologist were the top ranked, and that medical technologist, dental hygienist, respiratory therapist, and radiologic technologist ranked lowest.

In Fig 2, the physician assistant differed in rating and rank assigned by nurses and physicians. This may be interpreted by recognizing that functions performed by the physician assistant are those that have been long sought by nurses. The presence of the physician assistant is perhaps over two decades old, so the rating and rank of fourth assigned by the physicians may be significant.

The low rating and rank of medical records administrator by physicians compared to the other three providers suggests some serious, underlying conflicts and serious defects in the interpersonal relationships.

The four occupations ranking in the lower third may need to examine their rating/ranking, since these assignments were so consistent. Public relations programs, in-service education, and significant attention to education/training of personnel, among other efforts, is in order for those with low ratings/ranks.

The significance of each prestige score can be determined through an indirect comparison with results of the NORC studies (4). For example, a prestige score of 96 was obtained for Supreme Court Justice, 78 for public school teacher, and the low 80s for accountant. Mid-70s were identified for radio announcer and labor union official, with low 70s for news reporter and machinist. The mid 60s were recorded for plumber and auto repairmen, while the 50s were rated for store clerk, truck driver, and cook.

Those allied health professions with prestige scores in the low 60s and 50s, and rated as non-professions in NORC studies (4), are in need of self assessment to determine what variables can be changed. Persons in those occupations should engage in self examination to enhance their performance and image in health care delivery as well as to society at large.

REFERENCES

1. Trieman DJ: Prestige in Comparative Perspective. New York, Academic Press, 1977.

2. Blau PM, Duncan OD: The American Occupational Structure. New York, Wiley and Sons, 1967, p vii.

3. Isaacson LE: Career Information in Counseling and Teaching, ed 3. Boston, Allyn and Bacon, 1979, p 137.

4. Reiss AJ, Duncan OD: Occupations and Social Status. New York, Free Press, 1961.

5. Kanzaki G: Fifty years (1925–1975) of stability in the social status of occupations. Vocational Guidance Quart 25:102, 1976.

6. Harasymin S, Horne M, Lewis S: Occupational attitudes in population subgroups. Vocational Guidance Quart 25:147, 1977.

7. Penn R: Occupational prestige hierarchies: a great empirical invarient. Soc Forces 54:352, 1975.

8. Shortell SM: Occupational prestige differences within the medical and allied health professions. Soc Sci Med 8(1):1–9, 1974.

9. Prescott PA, Bowen SA: Physician-nurse relationships. Ann Intern Med 103(1):127–133, 1985.

10. Kalisch BJ, Kalisch PA: Improving the image of nursing. Am J Nurs 83(1):48–52, 1983.

11. Parker HJ, Chan F: Stereotyping. Physical and occupational therapists characterize themselves and each other. Phys Ther 66(5):668–672, 1986.

12. Parker HJ, Chan F: Prestige of radiologic technologists: perception of two allied health professions. Radiol Technol 57(2):152–156, 1985.

13. Marascuilo LA, McSweeney M: Non Parametric and Distribution Free Methods for the Social Science. Monterey, Brooks Cole, 1977, pp 458–462.

ACKNOWLEDGMENTS

We acknowledge the cooperation of the physical therapy and occupational therapy staffs in participating hospitals (Dallas), the Texas Nurses Association officials of districts 3 and 4, and the executive directors of Dallas and Tarrant County Medical Societies. Charles F. Mooney, MD, acquired the resident physician data. Fig 1 is reproduced with permission from *Radiologic Technology* 57(2):152–156, 1985.

A Referral Center for Cardiopulmonary Diseases

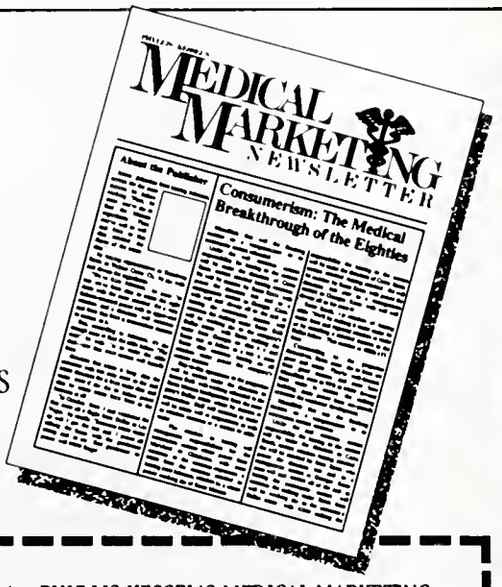
Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia
  & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address:
P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

If Your Practice is Growing Too Rapidly, Don't Read This Ad



But if you'd like to grow, this newsletter will help you to do it. PHYLLIS KESSEL'S MEDICAL MARKETING NEWSLETTER is the first and only publication that specifically addresses the timely topic of medical marketing. Published four times a year by the Medical Marketing Division of PHYLLIS KESSEL ASSOCIATES, the largest medical public relations firm in New Jersey, the newsletter will teach you to use public relations and advertising techniques tastefully and effectively.

To subscribe to PHYLLIS KESSEL'S MEDICAL MARKETING NEWSLETTER, just complete the form and take advantage of our introductory offer.

PHYLLIS KESSEL ASSOCIATES
780 West Park Avenue, Oakhurst, N.J. 07755

Yes, I would like to receive PHYLLIS KESSEL'S MEDICAL MARKETING NEWSLETTER at the special introductory pre-paid price of $95/year. (Regular price: $125.00)

☐ **Enclosed is my check for $95.**
☐ **Please bill me $125.** To order by phone call **201-531-7082**

NAME _____ TEL. NO _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Mail To: Phyllis Kessel's Medical Marketing Newsletter, 780 W. Park Ave., Oakhurst, N.J. 07755

JEANNE MARTIN, PhD

PATRICIA A. HONCHAR, PhD

CHARLES E. ALEXANDER, MD, DrPH

Elevated blood lead levels in adults: a reportable occupational disease in Texas

Jeanne Martin, PhD, Bureau of Epidemiology, Texas Department of Health, Austin; Patricia A. Honchar, PhD, National Institute for Occupational Safety and Health, Centers for Disease Control, Austin; and Charles E. Alexander, MD, DrPH, Bureau of Epidemiology, Texas Department of Health, Austin. Reprint requests to Dr Martin, Epidemiologist, Bureau of Epidemiology, Texas Department of Health, 1100 West 49th St, Austin, TX 78756.

This article provides a brief review of the problems associated with lead in the workplace, including the biological effects of lead exposure, the potential for exposure in Texas, and methods for measuring and reducing exposure. A brief summary of procedures for reporting adult elevated blood lead levels to local health authorities as mandated by the Texas Occupational Disease Reporting Act also is provided. All Texas physicians, clinical and hospital laboratories, blood banks, and other facilities conducting blood lead levels must report to local health authorities all persons 15 years of age or older who have lead levels at or above 40 micrograms per deciliter of blood.

Lead is one of the oldest metals known to man and has been used for a variety of purposes since ancient times. Its low melting point, ductility, malleability, and resistance to weathering made it a very useful material in the preindustrial age (1). During the time of the Roman Empire, lead frequently was used to sweeten and preserve wine. Water pipes in many Roman localities were made of lead, and cooking vessels often were lined with lead. Lead consumption among Roman aristocrats has been estimated to be as much as 250 μg of lead per day, more than five times the maximum intake (45 μg per day) recommended now by the World Health Organization. The notoriously poor health and erratic behavior of many Roman aristocrats and emperors may have been partially attributable to lead poisoning (2). Epidemics of lead poisoning continued throughout the Middle Ages. These epidemics usually resulted from continuing the Roman practice of adding lead to wine to improve the taste, from the ingestion of acidic beverages in lead-glazed earthenware, and from the ingestion of beverages contaminated with lead during manufacture. The cases of Devonshire colic that occurred in 1767 were traced to cider that had been contaminated with lead. In colonial America, lead colic occurred from the ingestion of rum distilled in vessels made of lead (3). With the growth of industrialization in the 1800s, occupational lead poisoning became an increasingly serious problem (4). In 1883, the Factories (Prevention of Lead Poisoning) Act was passed in Great Britain requiring all white-lead factories to conform to prescribed standards with regard to ventilation, lavatory accommodations, baths for women, restrooms, protective clothing, and respirators. In 1899, lead poisoning became a reportable condition in Great Britain. During the subsequent 80 years, a steady decline in the number of lead poisoning cases in Great Britain has been ascribed to increased awareness of and attention to lead exposure as a result of the case reporting requirement (3). Although the heavy occupational exposures and resulting health problems that occurred in the 1800s and early 1900s are rare today, milder forms of lead poisoning continue to be a problem in many industries.

In 1985, Texas enacted a law that requires reporting of elevated blood lead levels in adults to state health authorities. This article summarizes the health effects resulting from lead exposure in adults, describes modern occupational exposures to lead, and discusses the new Texas law which requires physicians and laboratories to report elevated blood lead levels in adults.

Biological effects of lead exposure

Exposure to lead results in the gradual accumulation of lead in a variety of tissues including a rapidly exchangeable pool of lead in blood and soft tissues, a moderately exchangeable pool of lead in skin and muscles, and a more stable pool of lead in the skeleton (4). At low levels of lead exposure, it may take months or years for clinical symptoms to appear, but even without clinical symptoms of lead poisoning the body may respond with a variety of biochemical abnormalities. With continued low-level exposure, these subclinical abnormalities may progress to mild and then to severe clinical symptoms. At higher levels of exposure, symptoms may appear within days or weeks. In other words, lead exposure can cause a broad spectrum of effects ranging from subclinical to serious clinical symptoms (4).

Clinical symptoms of lead poisoning are frequently nonspecific: they may include fatigue and malaise, sleeplessness, increased irritability, dizziness, headache, memory deficit, and pain in the limbs. Anemia and peripheral neuropathy also have been reported (5). In the latter, the extensor muscles of the wrist and fingers are ordinarily the first and most severely involved, producing a characteristic wrist and finger drop. Paralysis of the peroneal muscles may cause foot drop. In the most severe forms of poisoning, profound disturbances of the central nervous system are prominent and include convulsions, delirium, and coma (4,5). Gastrointestinal symptoms resulting from increased lead absorption include nausea, anorexia, gastric discomfort, and dyspepsia. Severe abdominal cramps known as lead colic, typically associated with constipation and lasting for several days, also may occur (4). Recent studies have shown a positive relationship between blood pressure (systolic and diastolic)

Occupational diseases are defined by the Texas Occupational Disease Reporting Act, (Texas Civil Statutes, Article 5182C) as "those diseases and abnormal health conditions that are caused by or are related to conditions in the workplace."

and blood lead levels, with no evidence of a threshold blood lead level for this relationship (6). Prolonged exposure to lead may result in a progressive renal disease characterized by diffuse interstitial fibrosis and renal failure (4,5,7,8).

It is not possible to specify the blood lead level at which these various symptoms of lead poisoning can be observed. Individual response to a given dose of lead will vary and only mild symptoms of lead poisoning may occur with very high blood lead levels and vice versa. Nevertheless, a positive association has been found between prevalence of symptoms and blood lead levels. One study of workers in two lead smelters and a chemical plant found that 11% of workers with extensor muscle weakness or gastrointestinal symptoms had lead levels from 40 to 59 μg/dL (1.93 μmol/L to 2.85 μmol/L), and 16% of workers with these symptoms had lead levels from 60 to 79 μg/dL (2.90 μmol/L to 3.81μmol/L). Twenty-six percent of the workers with anemia had blood lead levels less than 80 μg/dL. On the other hand, renal dysfunction tended to result from relatively prolonged, high-dose lead exposure (120 to 160 μg/dL) (or 5.79 μmol/L to 7.72 μmol/L), particularly among patients with a history of oral chelation therapy (5).

Lead exposure has been shown to affect reproduction adversely. Moderately increased absorption of lead (mean blood lead level of 53 μg/dL, or 2.56 μmol/L) results in decreased fertility in men due to increased frequency of asthenospermia, hypospermia, and teratospermia (9). Women occupationally exposed to lead have a higher rate of miscarriage, abortion, and stillbirth than working women not exposed to lead (10). A study published in 1911 compared the reproductive experience of mill workers with that of factory workers exposed to lead. Mill workers had a rate of 47.6 stillbirths and abortions per 1,000 females; female factory workers exposed to lead premaritally had a rate of 86.0, and those exposed to lead after marriage had a rate of 133.5 (11).

In pregnant women, lead crosses the placenta, and lead concentrations in umbilical cord blood are nearly equal to those in maternal blood (12). Furthermore, children appear to be particularly susceptible to the neurological effect of lead, with fetuses considered to be at least as susceptible as children. Chronic exposure to excessively high levels of lead can result in mental retardation, paralysis, and visual disturbances in children. Recent studies have found that at blood lead levels of 40 to 80 μg/dL (1.93 μmol/L to 3.86 μmol/L), children may experience subtle neurological and psychological abnormalities (13-15); some studies have suggested that such effects occur at blood lead levels below 40 μg/dL (1.93 μmol/L) (16,17). Furthermore, biochemical abnormalities have been detected at levels as low as 18 μg/dL (0.87μmol/L) (18).

All persons experience some exposure to lead. Studies conducted in East Asia showed average blood lead levels in children of 3 μg/dL (0.14 μmol/L) (4) and mean blood levels of 3 to 5 μg/dL (0.14 μmol/L to 0.24 μmol/L) in adults in Nepal and New Guinea (19). Data from the second National Health and Nutrition Examination Survey conducted in the United States from 1976 through 1980 showed a median blood lead level of 13 μg/dL (0.63 μmol/L) for the general population (20). These data also demonstrated a 37% drop in average blood lead levels over the five-year period, a finding strongly correlated with the reduction in the lead content of gasoline during that same period. It has been estimated that 90% of atmospheric lead is due to automobile exhaust, which explains why average blood lead levels are so much higher in industrialized countries than in less-developed countries (21).

Laboratory testing for lead levels

The most commonly used test of lead absorption is the measurement of lead in whole blood. However, the biological half-time for lead in blood and soft tissues is only three weeks (compared to five years for lead in bones), so this measure can provide only an indication of the amount of lead recently absorbed into the body (6). Better methods for measuring the body's total lead burden are available. Lead inhibits the heme biosynthetic pathway by interfering with enzymes necessary for the biosynthesis of heme. The inhibition of the enzyme ferrochelatase in the bone marrow results in the production of erythrocytes with high levels of protoporphyrin IX. Zinc complexes with this erythrocyte protoporphyrin to form zinc protoporphyrin (ZPP). ZPP levels can be measured directly by hematofluorometer, or the ethyl acetate-acetic acid extraction procedure can be used to convert zinc protoporphyrin to erythrocyte protoporphyrin which then can be measured as free erythrocyte protoporphyrin (FEP) by fluorometry. Both measurements, FEP and ZPP, yield similar values, although at high exposure levels, ZPP values may be lower than FEP values. ZPP is the more common measure because it is more economical (22,23).

Occupational exposure to lead

The United States uses over a million tons of lead a year. In 1969, the total industrial lead consumption in the US was estimated to be 1.39 million tons. Forty-two percent of this lead was used in the manufacture of lead storage batteries. An additional 26% was used in the manufacture of other products such as cable and wire, ammunition, pipes, pewter, lead-glazed pottery, and crystal glass. Twenty-seven percent also was used in pigments and gasoline anti-

knock additives (the percentage of lead used in gasoline has undoubtedly decreased since 1969 with the increase in use of unleaded gasoline) (1).

Approximately 120 occupations involving possible exposure to lead have been identified; these are listed in Fig 1. High-risk industries for lead exposure include primary and secondary lead smelting and refining operations. Potential for exposure also may be present in industries that manufacture lead products: the heating, grinding, and volatilization that occur in the manufacturing process may result in the release of lead in biologically active forms. Lead often is used as a weather-resistant coating on iron and steel structures such as ships, bridges, and railways. The repair or demolition of such structures that involves cutting through lead-painted steel can be a significant source of lead exposure. Recent studies have reported that rifle instructors who spend large amounts of time in poorly ventilated indoor firing ranges are at increased risk of lead absorption (1,4,24). Small businesses such as automobile radiator repair shops and scrap metal smelting may provide some of the greatest potential for lead exposure because of poor ventilation, poor hygiene, lack of medical surveillance, and general lack of awareness of the adverse effects of lead (3).

Researchers from the National Institute for Occupational Safety and Health (NIOSH) conducted the National Occupational Hazard Survey (NOHS) from 1972 to 1974 to provide estimates of the number of workers potentially exposed to job hazards and to describe the industries and occupations where these potential hazards are observed. A probability sample of 5,000 of 5 million US work sites was selected and site visits were conducted to determine potential hazards (25,26). From this data base, it is possible to estimate that approximately 86,681 people in Texas worked in industries or businesses in the early 1970s with the potential for exposure to lead. These workers would have been employed in over 114 counties in the state and worked in a total of 4,382 facilities. The distribution of workers in Texas potentially exposed to inorganic lead is illustrated in Fig 2, derived from the NIOSH exposure survey. Clearly, the potential for occupational exposure to lead in Texas is significant.

Children of workers exposed to lead also may be at increased risk of lead absorption. Several studies have shown elevated lead levels in these children (27,28). The probable source of lead exposure is presumed to be transmission of lead into the home via contaminated work clothing.

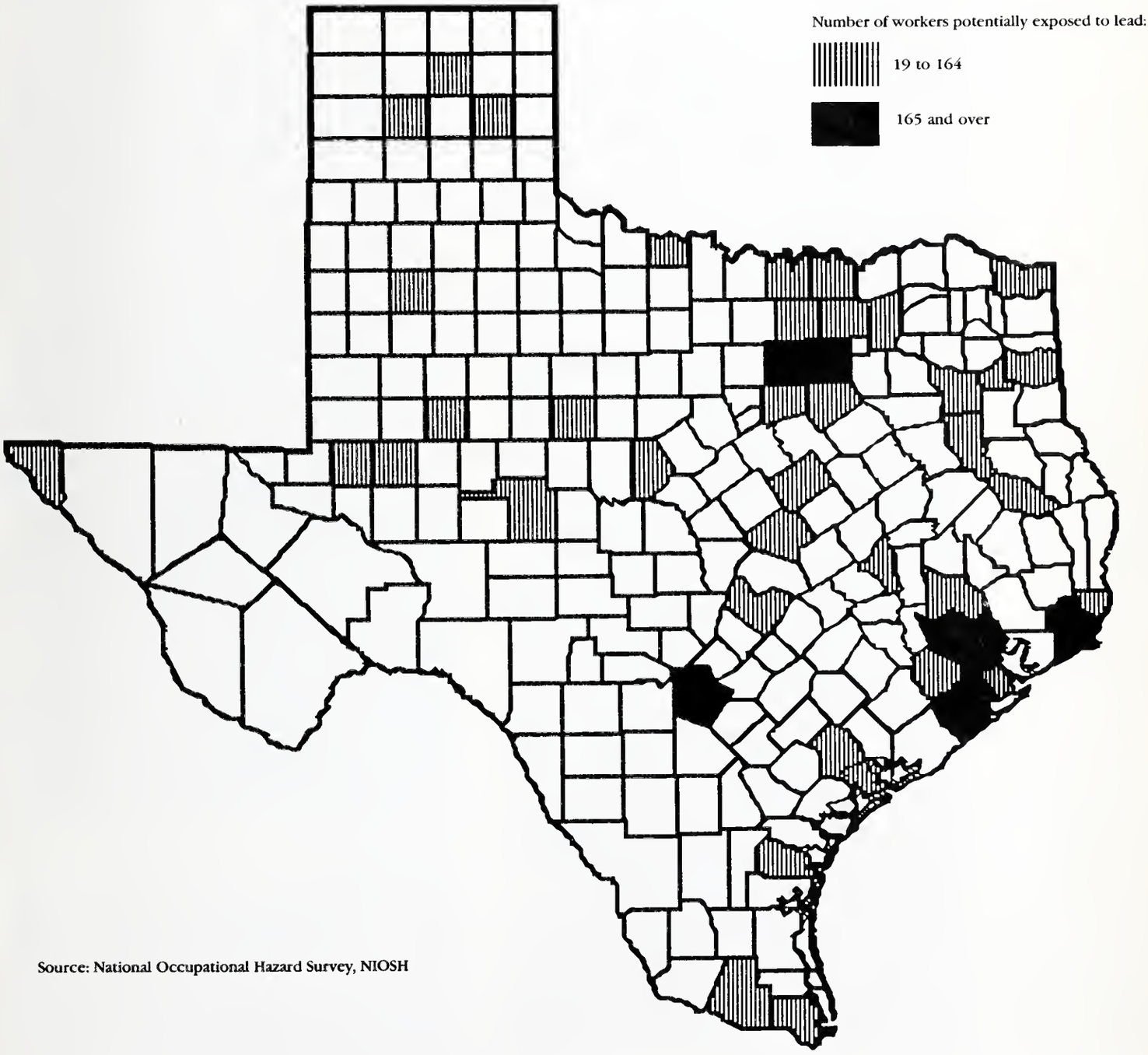
The experience of other states that recently have implemented programs for reporting elevated blood lead levels in adults provides some insight as to the extent of the problem. New York State first required the reporting of elevated lead levels in 1981. During the first year, the New York State Health Department

1. Occupations at risk of exposure to inorganic lead

Babbitters	Enamel makers	Lead smelters	Roofers
Battery makers	Farmers	Lead stearate makers	Rubber buffers
Bookbinders	File cutters	Lead workers	Rubber makers
Bottle cap makers	Filers	Linoleum makers	Scrap metal workers
Brass founders	Flower makers, artificial	Linotypers	Sheet metal workers
Brass polishers	Foundry molders	Lithographers	Shellac makers
Braziers	Galvanizers	Match makers	Ship dismantlers
Brick burners	Glass makers	Metal burners	Shoe stainers
Brick makers	Glass polishers	Metal cutters	Shot makers
Bronzers	Gold refiners	Metal grinders	Solderers
Brush makers	Gun barrel browners	Metal miners	Solder makers
Cable makers	Incandescent lamp makers	Metal polishers	Steel engravers
Cable splicers	Insecticide makers	Metal refiners	Stereotypers
Canners	Insecticide users	Mirror silverers	Tannery workers
Cartridge makers	Japan makers	Motor fuel blenders	Temperers
Ceramic makers	Japanners	Musical instrument makers	Tetraethyl lead makers
Chemical equipment makers	Jewelers	Painters	Tetramethyl lead makers
Chippers	Junk metal refiners	Paint makers	Textile makers
Cutlery makers	Lacquer makers	Paint pigment makers	Tile makers
Demolition workers	Lead burners	Patent leather makers	Tin foil makers
Dental technicians	Lead counterweight makers	Pearl makers, imitation	Tinners
Diamond polishers	Lead flooring makers	Pipe fitters	Type founders
Dye makers	Lead foil makers	Plastic workers	Typesetters
Electronic device makers	Lead mill workers	Plumbers	Varnish makers
Electroplaters	Lead miners	Pottery glaze mixers	Wallpaper printers
Electrotypers	Lead pipe makers	Pottery workers	Welders
Emery wheel makers	Lead salt makers	Putty makers	Zinc mill workers
Enamel burners	Lead shield makers	Riveters	Zinc smelter chargers
Enamelers			

From reference 1.

2. Distribution by county of workers potentially exposed to inorganic leads, Texas, 1972–1974.



Source: National Occupational Hazard Survey, NIOSH

received 1,805 reports of elevated blood lead levels on 575 adults, and the exposure was determined to be occupational in all but 28 persons (5.0%) (29).

Reducing exposures in the workplace

The extensive use of lead in our society does not mean that uncontrolled exposure to lead is inevitable. The technology is available to reduce lead exposure in the workplace to levels below permitted exposure limits for all workers, even those in occupations heavily involved with lead. Some of the methods available for controlling lead exposure and preventing absorption of lead are: enclosing work processes that produce exposure to lead; adequately ventilating work areas; altering work practices; using personal protective equipment such as clothing and respirators; and modifying personal hygiene practices (24).

Because exposure to lead can be controlled, the Occupational Safety and Health Administration has adopted a standard for occupational lead exposure that is applicable to all industries in Texas except construction, agriculture, and governmental entities (30). Only the main points of the standard will be reviewed here. The standard sets 50 μg of lead per cubic meter of air (50 $\mu g/m^3$) as the maximum permissible exposure limit. In addition, employees working in areas where they are exposed to air lead concentrations from 30 to 50 $\mu g/^3$ must have blood lead and zinc protoporphyrin testing made available to them every six months. Workers with blood lead levels above 40 μg/dL (1.93 μmol/L) must have blood lead levels measured every two months until the level drops below 40 μg/dL (1.93 μmol/L). Workers with average blood lead levels above 50μg/dL (2.41 μmol/L) (average of the last three samples or average of all samples over the previous six months whichever, period is longer) must be removed to an area where they will not be exposed to lead and must have blood lead levels measured every two months until the level drops below 40 μg/dL (1.93 μmol/L). The standard protects the workers' status and pay grade while the worker is away from his or her usual work area; once the blood lead level falls below 40 μg/dL (1.93 μmol/L), the worker can be returned to his or her usual place. The standard also prohibits the regular use of chelation therapy to prevent elevated blood lead levels.

Reporting of adult elevated blood lead levels in Texas

The Texas Occupational Disease Reporting Act (Texas Civil Statutes, Article 5182C), which became effective in October 1985, requires physicians and laboratories to report to the Texas Department of Health each blood lead test where the lead level is greater than or equal to 40 μg/dL (1.93 μmol/L) in persons 15 years of age or older (31). This reporting requirement is based on the facts that exposure to lead can cause adverse health effects, that exposure in the workplace can and should be controlled, and that the adverse health effects which result from exposure can be prevented.

Procedures for reporting parallel those for Texas communicable disease reporting. Case reports are made to local health authorities, who transmit the information to the Texas Department of Health. Reports also can be made directly to the Bureau of Epidemiology, Texas Department of Health, on a toll-free number: 1–800–252–8239. In either case, the initial report must include the name, address, sex, age, and race of the person; the blood lead level; and the date of the test. The Bureau of Epidemiology will follow up the initial report by telephoning the physician who requested the blood lead determination to obtain more information about the case. Further investigation may be appropriate if the Texas Department of Health can assist in determining the source of the lead exposure and in making recommendations for its control.

The Occupational Disease Reporting Act provides for the confidential handling of case reports: information about individual cases will be held by the local health authorities and the Texas Department of Health as confidential medical records. The Bureau of Epidemiology will produce regular summaries of reported cases which describe the occurrence of adult elevated blood lead levels in Texas without personal identifiers. Through both case follow-up and summary reports, the medical and public health communities will gain a better understanding of occupational lead exposure in Texas and stimulate appropriate preventive measures. The cooperation of Texas physicians in recognizing and reporting cases of elevated blood lead levels is essential to this process.

REFERENCES

1. National Institute for Occupational Safety and Health. Occupational exposure to inorganic lead. Criteria for a recommended standard. US Department of Health, Education, and Welfare, publication No. (HSM) 11010, 1972.

2. Nriagu JO: Saturnine gout among Roman aristocrats. Did lead poisoning contribute to the fall of the Empire? N Engl J Med 308(11):660–663, 1983.

3. Hunter D: The diseases of occupations. Boston, Little Brown and Co, 1955.

4. Fischbein A: Environmental and occupational lead exposure, in Rom WN, Renzetti AD, Lee JS, et al (eds): Environmental and Occupational Medicine. Boston, Little Brown and Co, 1983, pp 433–447.

5. Baker EL Jr, Landrigan PJ, Barbour AG, et al: Occupational lead poisoning in the United States: clinical and biochemical findings related to blood lead levels. Br J Ind Med 36(4):314–322, 1979.

6. Pirkle JL, Schwartz J, Landis JR, et al: The relation-

ship between blood lead levels and blood pressure and its cardiovascular risk implications. Am J Epidemiol 121(2): 246–258, 1985.

7. Cooper WC, Gaffey WR: Mortality of lead workers. J Occup Med 17(2):100–107, 1975.

8. Selevan SG, Landrigan PJ, Stern FB, et al: Mortality of lead smelter workers. Am J Epidemiol 122(4):673–683, 1985.

9. Lancranjan I, Popsecu HI, Gavanescu O, et al: Reproductive ability of workmen occupationally exposed to lead. Arch Environ Health 30(8):396–401, 1975.

10. Boulos BM: Special problems of lead in women workers, in US Department of Health, Education, and Welfare, National Conference on Health Effects of Occupational Lead and Arsenic Exposure. Chicago, 1976, pp 39–50.

11. Oliver T: A lecture on lead poisoning and the race. Br Med J 1:1096–1098, 1911.

12. Lead poisoning in a capacitor and resistor plant—Colorado. MMWR 34(25):385–394, 1985.

13. Landrigan PJ, Baker EL Jr, Feldman RG, et al: Increased lead absorption with anemia and slowed nerve condition in children near a lead smelter. J Pediatr 89(6):904–910, 1976.

14. Landrigan PJ, Gelbach SH, Rosenblum BF, et al: Epidemic lead absorption near an ore smelter. The role of particulate lead. N Engl J Med 292(3):123–129, 1975.

15. Landrigan PJ, Whitworth RH, Baloh RW, et al: Neuropsychological dysfunction in children with chronic low-level lead absorption. Lancet 1(7909):708–712, 1975.

16. Beattie AD, Moore MR, Goldberg A: Role of chronic low-level lead exposure in the aetiology of mental retardation. Lancet 1(7907):589–592, 1975.

17. Needleman HL, Gunnoe C, Leviton A, et al: Deficits in psychologic and classroom performance of children with elevated dentine lead levels. N Engl J Med 300(13): 689–695, 1979.

18. Cavalleri A, Baruffini A, Minoia C, et al: Biological response of children to low levels of inorganic lead. Environ Res 25(2):415–423, 1981.

19. Friberg LI: Yant memorial lecture. The rationale of biological monitoring of chemicals—with special reference to metals. Am Ind Hyg Assoc J 46(11):633–642, 1985.

20. Mahaffey KR, Annest JL, Roberts J, et al: National estimates of blood lead levels: United States, 1976–1980. N Engl J Med 307(10):573–579, 1982.

21. Annest JL, Pirkle JL, Makuc D, et al: Chronological trend in blood lead levels between 1976 and 1980. N Engl J Med 308(23):1373–1377, 1983.

22. Preventing lead poisoning in young children. Centers for Disease Control, January 1985.

23. Hryhorczuk DO, Hogan MM, Mallin K, et al: The fall of zinc protoporphyrin levels in workers treated for chronic lead intoxication. J Occup Med 27(11):816–820, 1985.

24. Results of blood lead determinations among workers potentially exposed to lead—United States. MMWR 32(16):216–219, 1983.

25. Frazier T: NIOSH occupational health and hazard surveillance systems. J Toxicol Clin Toxicol 21(1–2): 201–209, 1983.

26. Frazier TM, Lalich NR, Pedersen DH: Uses of computer-generated maps in occupational hazard and mortality surveillance. Scand J Work Environ Health 9(2 Spec No):148–154, 1983.

27. Richter ED, Berant M, Baras M, et al: Blood zinc protoporphyrin levels in the children and wives of lead battery workers: a preliminary report. Isr J Med Sci 21(9):761–764, 1985.

28. Dolcourt JL, Hamrick HJ, O'Tuama LA, et al: Increased lead burden in children of battery workers: asymptomatic exposure resulting from contaminated work clothing. Pediatrics 62(4):563–566, 1978.

29. New York Department of Health. Environmental disease surveillance program: I. Lead in adults, 1981–1982. Albany, New York.

30. United States. Safety Administration. General Industry: OSHA safety and health standards (29 CFR 1910). Washington, US Department of Labor, 1983 (OSHA 2206).

31. Title 25. Health Services Part 1. Texas Register, Texas Department of Health, chapter 99. Occupational Disease Reporting. September 27, 1985 (10 Tex Reg 3766–3767).

Adjuvant pain treatment in cancer: a case for psychopharmacology

Francisco Fernandez, MD, Assistant Professor of Psychiatry, Consultation/Liaison Psychiatry Section, Department of Internal Medicine, St Luke's Episcopal Hospital, 6720 Bertner Ave, Houston, TX 77030. Frank Adams, MD, Chief, Division of Neuropsychiatry, Princess Margaret Hospital, Toronto, Ontario, Canada; Valerie F. Holmes, MD, Assistant Professor of Psychiatry, State University of New York-Stony Brook, Director, Consultation Liaison Services; and Joel K. Levy, PhD, Neuropsychologist, Institute for Rehabilitation and Research, Houston, TX 77030. Reprint requests to Dr Fernandez.

Effective analgesia is crucial in maintaining quality of life for cancer patients who suffer pain. Psychiatrists commonly encounter pain problems in treating oncology patients, but, like other specialists, they frequently overlook the benefits of psychotropics in pain management. Specific psychopharmacologic approaches, founded in recent advances from the neurosciences, can be helpful adjuvants in the management of these patients who have pain from various sources (1–3). This report reviews diagnostic and therapeutic strategies in the management of pain from terminal illness.

Pain is a common symptom that occurs across many diagnostic categories in cancer patients. Given that pain is a perception rather than a sensation, it is difficult to describe and assess. In short, pain is whatever the patient says hurts. Diagnosing a pain disorder therefore requires careful appraisal of specific symptoms, tumor type and metastatic involvement, level of impairment, and physical examination and results of pertinent laboratory data. The patient's physical state, past experience, anticipation, and apprehension all contribute to the way he will interpret and describe a given stimulus.

The complaint of pain has four broad but integrated components: nociception, pain, suffering, and pain behavior. Loeser (4) has defined nociception as the activation of pain receptors either through A delta or C sensory fibers, pain as the perception of that sensory input, suffering as the negative limbic affect for that sensation, and pain behavior as what is generated based on both the sensory and affective experiences. This model, known as the Seattle system for classifying pain complaints, has proven itself in the arena of chronic pain clinics.

However, cancer pain is distinct for several reasons. Cancer pain is most often true organic pain so that specific treatment directed at its etiology is possible. Acute cancer pain often becomes chronic when unrelieved because of explosive metastatic or progressive disease, physicians' and patients' irrational fears of addiction, the patients' need to keep a "stiff upper lip," their failure to notify the doctor of increasing pain and inadequate analgesia, or the patient's noncompliance with treatment. But by far the most important reason for unrelieved pain is that the systematic teaching of health care professionals in the management of pain of malignancies is deficient (5).

Diagnosing pain

Before addressing the specific uses of psychotropics in the management of cancer-related pain, we will briefly review a descriptive classification of pain that has practical implications for choosing psychotropic adjuvants. Although most descriptive classifications of pain are notorious for lacking applicability to individual patients, a universal classification system is imperative for defining the underlying pathophysiology of the pain and for guiding treatment. The five-axes system (6) endorsed by the International Association for the Study of Pain (IASP) in combination with their pain definitions (7–8) is a practical scheme for diagnosing and treating pain. With this system, any pain problem can be classified by region, system, temporal characteristics, intensity, and etiology. Superimposed on these dimensions are the IASP definitions of the character of the pain, which depend on the etiology and type of damage incurred. Thus, this taxonomy has more value than that of classification alone since it has predictive value relative to treatment which may guide the physician's choice of specific adjuvants.

Basic principles guiding treatment

Adequate analgesia remains the most important goal of treatment and also aids recovery from such associated symptoms as insomnia, exhaustion, and agitation. Narcotic analgesia is the preferred treatment for chronic organic pain associated with a malignancy. However, even when seemingly adequate doses of analgesics are administered, pain may sometimes persist. Inadequate knowledge of the degree of potency and of the pharmacokinetics of narcotics, as well as their administration in an intermittent dosage schedule (as required) are the most common causes of inadequate analgesia (9–11). Ideally, the object of narcotic analgesia should not be to treat pain, but rather to prevent it.

When choosing a narcotic analgesic, it is best to begin with a low potency narcotic and increase potency as necessary. Meperidine should be avoided whenever possible as several studies have shown that its metabolite, normeperidine, is notorious for causing a variety of adverse central nervous system effects including seizures (12). Meperidine's short duration of action also makes it a poor choice in the treatment of malignant pain.

In cases of pain refractory to increasing dosages of narcotic analgesics, it has become popular to add such longer acting agents as methadone or the newer controlled-release preparations of morphine. The rationale for the use of these agents stems in part from reports of tolerance with long term, continuous use of opiates. Most pharmacological data suggest that tolerance need not be a problem (13). When oral opiates are used with repeated administration, some tolerance does occur, but, in general it is dose-limited to 15–20% over six to eight weeks of continuous use. This degree of tolerance is clearly manageable. Physicians also prescribe either

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

FRANCISCO FERNANDEZ, MD
FRANK ADAMS, MD
VALERIE F. HOLMES, MD
JOEL K. LEVY, PHD

long-acting or controlled-release narcotics in anticipation of the patient's failure, after discharge, to comply with a scheduling of analgesics every three to four hours. Usually this failure is avoidable with proper patient education.

Our experience is that regimens of single oral agents are much simpler, less neurotoxic, and more likely to elicit compliance than combinations of short- and long-acting analgesics. We specifically avoid methadone because its analgesic effect is of short duration and does not correlate with either its half-life or its plasma concentration (14). Additionally, since its half-life changes over time, there is greater likelihood of cumulative toxicity. Therefore, the use of any long-acting or controlled-release preparations should be avoided, especially in elderly patients, patients who are cognitively impaired, or those who have multiple organ failure.

Our preferred parenteral narcotic analgesic is hydromorphone. It is a potent analgesic with few active metabolites, making it the most effective and potentially the least toxic of its class. It is comparable to heroin in solubility, kinetics, and potency (15). Hydromorphone's parenteral potency to morphine is 1:5 and its parenteral to oral potency is 1:4. The mean plasma half-life of hydromorphone is about four hours, so doses should be scheduled every three hours. If unwanted side effects occur with conversion to an oral preparation, either oral morphine elixir (16) or an orally administered combination of cola syrup and injectable hydromorphone is equally effective. The latter is palatable and, in our experience to date, devoid of significant adverse effects, such as nausea and vomiting.

Doubling or tripling the regular analgesic dose at bedtime obviates the need to wake the patients during the night. Generally, as dose requirements increase, adding a single dose of controlled-release morphine to the regular bedtime dose or providing for doses as needed (prn) through the night seldom significantly disrupts sleep patterns. Constipation remains the most serious side effect and a bowel management regimen should be started concomitantly with the initiation of any narcotic analgesics.

Narcotic analgesics should never be combined. As a rule such combinations result in added and unwanted toxicity rather than improved analgesia. Special care should be taken not to combine partial antagonists, such as pentazocine, butorphanol and nalbuphine, with pure agonists. All partial antagonists will precipitate a withdrawal reaction when added to any narcotic regimen.

We would like to stress that fear of dependency, addiction, and abuse should never enter into clinical decision making in the treatment of pain for a terminal disease. Dependency is most commonly encountered with prn schedules of medication. This is a classic example of operant conditioning whereby relief from pain is associated with and thus reinforced by the very taking of medication. Drug-seeking behavior, typically secondary to ineffective analgesia, is often misconstrued as abuse. Fear of addicting cancer patients who have pain from a malignancy only generates and perpetuates poor medical management.

Narcotic adjuvants: general considerations

When pain continues to be refractory despite optimal use of narcotics, adjuvant therapy may help improve pain control. Stimulants, neuroleptics, tricyclic antidepressants (TCAs), and anticonvulsants have been used for many years as analgesic adjuvants. The choice of co-analgesics should be individualized, with an important goal of treatment being to obtain the most potent combination of drugs with the simplest regimen. Although at present there are no established criteria for choosing one psychotropic adjuvant over another, physicians can follow simple guidelines based on the symptoms associated with the pain (17) and on the character of the pain (18).

Somatic pain can be found in both its acute and chronic forms and is the most common pain in cancer patients. It is described as an aching, constant pain. It is responsive to narcotic analgesics as well as to other conventional pain therapies. A specific instance in which the etiology of the pain warrants the use of adjuvants is metastatic bone pain, the most common type of somatic pain in oncology (19). Prostaglandin inhibitors have long been known as potent analgesic adjuvants. Oncology's specific interest in prostaglandin inhibition arose from the finding that metastatic bone pain is prostaglandin mediated (20). Thus, nonsteroidal, anti-inflammatory agents have specific analgesic value in this type of somatic pain. Fear of the antiplatelet effect of these agents limits their use. Salsalate, reportedly devoid of antiplatelet action (21) is moderately useful and can often be cautiously prescribed safely in patients with thrombocytopenia.

Deafferentation pain is commonly described as a raw, burning pain often superimposed on paroxysms of lancinating, stabbing, or grabbing pains. This pain may result from a wide variety of common problems, including peripheral nerve injury, arachnoiditis, cauda equina lesions, dysesthesias, postherpetic neuralgia, and thalamic lesions. It is often refractory to narcotics but responds to a challenge with intravenous barbiturates (18) and treatment with anticonvulsants (22), as well as to stimulation of the internal capsule and dorsal columns of the spinal cord. The utility of barbiturates as a diagnostic test in conjunction with the ability of anticonvulsants to prevent deafferentation pain makes this the most efficacious treatment for this debilitating type of pain. The mechanism of action of these

agents may be membrane stabilization, decreased kindling and polysynaptic transmission, or agonism of various neurotransmitters such as gamma-amino butyric acid (GABA) and serotonin. Transcutaneous nerve stimulation (23), dorsal column stimulators, and dorsal rhizotomies (25) also have a high rate of success.

Thus, when the etiology of the pain suggests a specifically treatable underlying mechanism, a nonnarcotic analgesic may exert a powerful analgesic effect in combination with a powerful narcotic. The primary etiology of the pain does not, however, necessarily determine the pain's type or character. For example, the pain of metastatic cancer may be either of the somatic or deafferentation type. As such, the etiology and character must be considered separately.

Narcotic adjuvants: psychopharmacologic interventions

STIMULANTS

The potentiating effects of stimulants on analgesia have been known for nearly a century. Herbert Snow was the first to use cocaine to augment the effect of morphine in patients with advanced cancer in 1896 (26). Solutions containing amphetamines, such as Brompton's cocktail, have been in use for pain relief in the terminal cancer patient for some time (27). It is important to remember, however, that it is only the narcotic in the solution that relieves pain: the remaining agents merely comply with various requirements and alternate needs for different patients.

The best study to date on the use of amphetamines is Forrest and associates' series of 450 patients with acute postoperative pain (28). Forrest and colleagues were able to show that 10 mg of intramuscular dextroamphetamine doubled the effective analgesia of morphine both subjectively and by bioassay, with minimal side effects. The general experience with both methylphenidate and dextroamphetamine is that they can reduce narcotic requirements and counteract the adverse central nervous system effects of narcotics while restoring vital processes such as mood, affect, psychomotor activation, and other neurocognitive functions (15,27–29). A 5–20 mg oral dose of dextroamphetamine (or its equivalent for methylphenidate) can significantly improve the patient's quality of life. Arguments against the psychostimulants basically rely on questions about the addictive potential of these agents, a moot issue in the treatment of malignant pain in terminally ill patients.

NEUROLEPTICS

Early reports on neuroleptics (phenothiazines, thioxanthenes, and butyrophenones) characterized these agents as producing euphoric quietude. When the neuroleptic droperidol (a butyrophenone) was used in combination with narcotic analgesics to sedate conscious patients, neuroleptoanalgesia ensued. Many studies are available which describe the augmenting analgesic effects of the neuroleptics (30). Head and associates have shown that another butyrophenone, haloperidol (actually derived from meperidine), potentiates the effects of morphine both acutely and chronically (31). This relationship is further strengthened by the finding that some neuroleptics can bind to opiate receptors (32). Inadequate knowledge of the pharmacology of these agents, mistaken notions about their sedative properties, fear of extrapyramidal side effects and the myth of using "mind-altering drugs" restrict the appropriate use of these agents.

Our preferred neuroleptic is haloperidol. It is the most potent agent of its class and has the least anticholinergic and alpha-adrenergic blocking properties (33), thus making it ideal as a narcotic adjuvant. Even in small doses (1–2 mg four times daily) it can provide significant relief. Its affinity for the mesolimbic dopamine pathways is theoretically of added benefit in diminishing the negative affective experience associated with pain.

TRICYCLIC ANTIDEPRESSANTS

A recognition of the similarity of the antihistaminic properties between tricyclic antidepressants (TCAs) and the neuroleptics gave rise to an interest in the use of TCAs as analgesic adjuvants. Theoretical interest in TCAs remains high because these drugs augment the action of the neurotransmitters involved in the periaqueductal gray area and connecting fiber tracks that are of major significance in pain control (34).

The choice of a particular TCA is based largely on clinical experience and intuition. Even though there is abundant literature that TCAs act on reticular and limbic components of the central nervous system involved in pain transmission (34), their use is largely empirical. Regardless of whether there is a clinical depression, these agents can sometimes provide significant relief. TCAs are able to enhance both serotonergic and noradrenergic transmission, which may be impaired from stress, depression, or the pain itself. The enhancement of serotonergic transmission should theoretically augment analgesia through the descending inhibitory pathways that synapse with the nociceptive cell bodies in the dorsal horn (15). In reality, whether a serotonergic or noradrenergic agent is used, narcotic analgesia is augmented. Therefore neither type of TCA is superior to the other. When in doubt, however, a serotonergic TCA should be used, since the bulk of the pharmacological data favors these agents.

Given that all TCAs have equivalent clinical

efficacy, choosing the most appropriate agent requires knowledge of the pharmacological profiles of the TCAs as well as the target symptoms to be treated (36). For example, if a patient were agitated and anxious and complained of insomnia, a serotonergic (calming or sedating) TCA would be appropriate. However, if the patient were fatigued, dysphoric, and anhedonic, a noradrenergic (stimulating) TCA would be preferable. In the latter types of cases, we have found stimulants to be more effective and devoid of the typical side effects associated with TCAs (29). Determination of the dosage should be individualized, as many patients report significant improvement at lower dosages than that for depression. Similar guidelines for dosing as with the pharmacotherapy of depression should otherwise be followed (37).

The effectiveness of TCAs has recently been called into question in a controlled study of the treatment of deafferentation pain associated with diabetic, peripheral neuropathy (38). The evidence for the analgesic effect of TCAs is largely theoretical, and they may have greater effectiveness in chronic pain than in organic pain of malignant origin. The routine use of amitriptyline, adopted from the chronic pain clinics, should be avoided in cancer patients. Amitriptyline is a very toxic TCA, with the greatest affinity for central histaminic and muscarinic receptors, thus causing the most antihistaminic and anticholinergic side effects (36). If a serotonergic antidepressant is indicated for theoretical reasons, the use of either trazodone or amoxapine is recommended. Trazodone is a polycyclic antidepressant that is a pure, serotonergic reuptake blocker devoid of the major limiting side effects associated with tertiary amines, such as amitriptyline (36). Amoxapine, a dibenzoxapine, is reportedly the most potent serotonergic polycyclic antidepressant, having a greater affinity for the central serotonergic receptor than methysergide (Richelson E: unpublished data, presented at the American Psychiatric Association's 139th Annual Meeting, May 14, 1986, Washington, DC) and having relatively minor anticholinergic side effects. Its 7-hydroxy metabolite is a potent dopamine blocker (39) which, although of added theoretical interest and possible benefit in augmenting narcotic analgesia, also potentially increases the likelihood of extrapyramidal reactions. In general, the use of TCAs in cancer patients should be restricted (a) to situations in which depression coexists with a treatable pain syndrome; (b) to when insomnia is present despite adequate analgesia, and the use of benzodiazepines is contraindicated; or (c) to selected cases of deafferentiation pain refractory to anticonvulsants.

ANTICONVULSANTS

Anticonvulsants were first used as analgesic adjuvants following the discovery that some patients with chronic neuralgic head pain had abnormal electroencephalograms (17). Since then there have been numerous reports on the effective use of carbamazepine, phenytoin, and valproic acid for relieving paroxysmal neuralgic pain. Swerdlow has reviewed the literature on the value of anticonvulsant agents in the management of deafferentiation types of pain from various sources (40). Many patients with phantom breast, limb, and rectal pain have been treated effectively with anticonvulsants.

Carbamazepine and valproic acid, although extremely effective in reducing phantom sensations, are limited by severe hematopoietic and hepatic toxicity (41–42). Clonazepam, a benzodiazepine anticonvulsant similar in structure to diazepam, has been found to be effective in reducing deafferentation-type pain (43). Additional agents that have demonstrated efficacy include baclofen (44), a GABA derivative, and tetrahydroisoxazolopyridinol (THIP) a specific GABA agonist (45). Our experience with alprazolam and chlorazepate is that these agents are equally effective alternatives to the anticonvulsants in deafferentation-type pain. Their most limiting neurotoxicity is sedation, which is undesirable in cancer patients.

Despite their systemic toxicity, the clinical utility of anticonvulsants in the treatment of this severely debilitating pain syndrome is unsurpassed, with 70% effectiveness cited in some studies (46). The general experience with anticonvulsants in patients being concomitantly treated with marrow-toxic chemotherapeutic agents or those with impaired hepatic clearance is that there is no added toxicity. A systematic evaluation of these agents as analgesic adjuvants in cancer patients, with special attention to the question of alleged added toxicity, is urgently needed.

Conclusion

Pain in the terminally ill cancer patient can be excruciating and difficult to control. Some of the target symptoms unrelieved by adequate analgesia are remarkably sensitive to the effects of psychotropic agents. Advances in neuropsychopharmacology have demonstrated the clinical utility of stimulants, TCAs, neuroleptics and anticonvulsants in augmenting the effects of narcotic analgesia. Proof of their specific efficacy in the cancer pain patient, however, awaits more well-designed clinical studies. Nonetheless, most of the evidence supports the proposition that response to these medications is notable, and warrants their judicious trial in the management of pain from terminal illness refractory to narcotics and other standard pain control measures.

REFERENCES

1. Foley RM: The treatment of cancer pain. N Engl J Med 313(2):84–95, 1985.

2. Zimmerman M, Drings P: Guidelines for therapy in cancer patients, in Zimmermann M, Drings P, Wagner G (eds): Pain in the Cancer Patient. Pathogenesis, Diagnosis and Therapy, vol 89. Berlin, Springer-Verlag, 1984, pp 1–12.

3. Frazier LM, Kohl EJ: To comfort always: strategies for pain management in terminal cancer. NC Med J 45(5):283–290, 1984.

4. Loeser JD: Perspectives on pain, in Turner P (ed): Clinical Pharmacology and Therapeutics: Proceedings of Plenary Lectures, Symposia, and Therapeutic Sessions. Baltimore, University Park Press, 1980, p 313.

5. Bonica JJ: Cancer pain, in Bonica JJ (ed): Association for Research in Nervous and Mental Disease/Pain. New York, Raven Press, 1980, pp 335–362.

6. Merskey H: Development of a universal language of pain syndromes, in Bonica JJ (ed): Advances in Pain Research and Therapy, vol 5. New York, Raven Press, 1983, pp 37–52.

7. Pain terms: a list with definitions and notes on usage, in Pain, vol 6. Amsterdam, Elsevier/North-Holland Biomedical Press, 1979, pp 249–252.

8. Merskey H: Pain terms: a supplementary note, in Pain, vol 14. Amsterdam, Elsevier/North-Holland Biomedical Press, 1982, pp 205–206.

9. Marks RM, Sachar EJ: Undertreatment of medical inpatients with narcotic analgesics. Ann Intern Med 78(2):173–181, 1973.

10. Sriwatanakul K, Weis OF, Alloza JL, et al: Analysis of narcotic analgesic usage in the treatment of postoperative pain. JAMA 250(7):926–929, 1983.

11. Moertel CG: Treatment of cancer pain with orally administered medications. JAMA 244(21):2448–2450, 1980.

12. Kaiko RF, Foley KM, Grabinski PY, et al: Central nervous system excitatory effects of meperidine in cancer patients. Ann Neurol 13(2):180–185, 1983.

13. Twycross RG, Lack SA: Myths about morphine, in Twycross RG, Lack SA (eds): Symptom Control in Far Advanced Cancer: Pain Relief. London, Pitman Books Limited, 1983, pp 227–233.

14. Berkowitz BA: The relationship of pharmacokinetics to pharmacological activity: morphine, methadone and naloxone. Clin Pharmacokinet 1(3):219–230, 1976.

15. Cassem NH: Pain, in Rubenstein E, Fetterman DD (eds): *Scientific American Medicine* Current Topics in Medicine. New York, Scientific American, Inc, 1983, pp 9–14.

16. Walsh TD: Oral morphine in chronic cancer pain. Pain 18(1):1–11, 1984.

17. Bouckoms AJ: Analgesic adjuvants: the role of psychotropics, anticonvulsants and prostaglandin inhibitors. Drug Therapy Hospital (Nov), pp 41–48, 1981.

18. Tasker R, Tsuda T, Hawrulshyn P: Clinical neurophysiological investigation of deafferentation pain, in Bonica JJ (ed): Advances in Pain Research and Therapy, vol 5. New York, Raven Press, 1983, pp 713–738.

19. Oster MW, Vizel M, Turgeon LR: Pain of terminal cancer patients. Arch Intern Med 138(12):1801–1802, 1978.

20. Galasko CSB: The development of skeletal metastases, in Weiss L, Gilbert HA (eds): Bone Metastasis. Boston, G. K. Hall, 1981, pp 83–113.

21. Estes D, Kaplan K: Lack of platelet effect with the aspirin analog, salsalate. Arthritis Rheum 23(11):1303–1307, 1980.

22. Swerdlow M, Cundill JG: Anticonvulsant drugs used in the treatment of lancinating pain. A comparison. Anaesthesia 36(12):1129–1132, 1981.

23. Keravel Y, Sindon M: Anatomical conditions of efficacy of transcutaneous electrical neurostimulation in deafferentation pain, in Bonica JJ (ed): Advances in Pain Research and Therapy, vol 5. New York, Raven Press, 1983, pp 763–767.

24. Krainick FU, Thoden U: Dorsal column stimulation, in Wall PD, Melzack R (eds): Textbook of Pain. Edinburgh, Churchhill Livingstone, 1984, section 3D3, pp 701–705.

25. Nashold B, Otsdahl R, Bullitt E, et al: Dorsal root entry zone lesions: a new neurosurgical therapy for deafferentation pain, in Bonica JJ (ed): Advances in Pain Research and Therapy, vol 5. New York, Raven Press, 1983, pp 739–750.

26. Snow H: Opium and cocaine in the treatment of cancerous disease. Br Med J 2:718–719, 1896.

27. Twycross RG, Lack SA: Co-analgesics, in Twycross RG, Lack SA (eds): Symptom Control in Far Advanced Cancer: Pain Relief. London, Pitman Books, 1983, ch 16, pp 270–293.

28. Forrest WH Jr, Brown BW Jr, Brown CR, et al: Dextroamphetamine with morphine in the treatment of postoperative pain. N Engl J Med 296(13):712–715, 1977.

29. Fernandez F, Adams F: Methylphenidate treatment of patients with head and neck cancer. Head Neck Surg 8(4):296–300, 1986.

30. Moore J, Dundee JW: Alterations in response to somatic pain associated with anesthesia: VII: The effects of nine phenothiazine derivatives. Brit J Anaesth 33:422–431, 1961.

31. Head M, Lal H, Puri S, et al: Enhancement of morphine analgesia after acute and chronic haloperidol. Life Sci 24(22):2037–2043, 1979.

32. Maltbie AA: Analgesia and haloperidol: a hypothesis. J Clin Psychiatry 40:323–326, 1979.

33. Black JL, Richelson E, Richardson JW: Antipsychotic agents: a clinical update. Mayo Clin Proc 60(11):777–789, 1985.

34. Kocher R: The use of psychotropic drugs in the treatment of cancer pain, in Zimmermann M, Drings P, Wagner G (eds): Pain in the Cancer Patient. Pathogenesis, Diagnosis and Therapy, vol 89. Berlin, Springer-Verlag, 1984, pp 118–126.

35. Akil H, Liebeskind JC: Monoaminergic mechanisms of stimulation-produced analgesia. Brain Res 94(2):279–296, 1975.

36. Richelson E: Antimuscarinic and other receptor-blocking properties of antidepressants. Mayo Clin Proc 58(1):40–46, 1983.

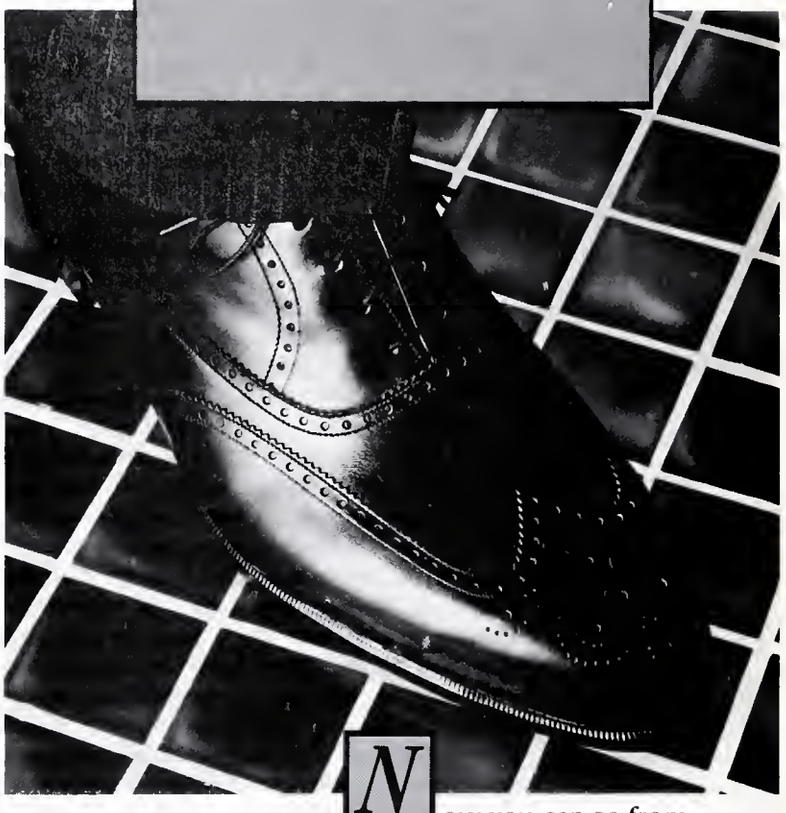
37. Fernandez F, Adams F, Levy JK, et al: Depression and cancer: an update. Tex Med 82(7):46–49, 1986.

38. Mendel CM, Klein RF, Chappell DA, et al: A trial of amitriptyline and fluphenazine in the treatment of painful diabetic neuropathy. JAMA 255(5):637–639, 1986.

39. Cohen BM, Harris PQ, Altesman RI, et al: Amoxapine: neuroleptic as well as antidepressant? Am J Psychiatry 139(9):1165–1167, 1982.

40. Swerdlow M: Anticonvulsant drugs and chronic pain. Clin Neuropharmacol 7(1):51–82, 1984.
41. Sillanpaa M: Carbamazepine. Pharmacology and clinical uses. Acta Neurol Scand 88(Suppl):1–202, 1981.
42. Suchy FJ, Balistreri WF, Buchino JJ, et al: Acute hepatic failure associated with the use of sodium valproate. N Engl J Med 300(17):962–966, 1979.
43. Green MW: Medical treatment of trigeminal neuralgia and cluster headache. Psychosomatics 26(12 Suppl):19–23, 1985.
44. Guyenet PG, Aghajanian GK: ACh, substance P and met-enkephalin in the locus coeruleus: pharmacological evidence for independent sites of action. Eur J Pharmacol 53(4):319–328, 1979.
45. Kjaer M, Nielsen H: The analgesic effect of the GABA-agonist THIP in patients with chronic pain of malignant origin. A phase-1–2 study. Br J Clin Pharmacol 16(5):477–485, 1983.
46. Bouckoms AJ: Recent developments in the classification of pain. Psychosomatics 26(8):637–642, 645, 1985.

The Only Transportation You'll Need in the Medical Center.



Now you can go from here to there in the Medical Center and never get in your car. Not once. In fact, the Marriott Hotel is strategically located a few feet from everything, from the world renown Texas Heart Institute and Texas Children's Hospital to the Total Health Care Center at Methodist Hospital and more.

After you return from your medical appointment or an important business meeting, we'll greet you with your very own luxurious, comfortable room, our comprehensive fitness center and all the special amenities you've come to expect from any four star Marriott hotel. The Marriott Hotel in the Medical Center. It's the only place to stay if you're going places in the Medical Center. For reservations, call 713/796-0080 or toll free at 1-800-228-9290 today.

HOUSTON Marriott® MEDICAL CENTER

6580 Fannin Street ◇ Houston, Texas 77030 ◇ 713/796-0080

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

The long-term outcome in Crohn's disease. P.H. Harper, MCh; V.W. Fazio, MD, BS; I.C. Lavery, MB, BS, et al. J.B. Lippincott Company, *Diseases of the Colon and Rectum,* vol 30, 1987, pp 174–179.

The long-term outcome of Crohn's disease was reviewed in 139 patients who were treated at the Cleveland Clinic for a minimum of 15 years. At the time of diagnosis, 38 (27%), 39 (28%), and 62 (43%) patients had small-bowel, large-bowel, and ileocolic patterns of disease, respectively. The disease progressed with time and, eventually, 104 (75%) patients had ileocolic disease. One hundred twenty-two patients (88%) underwent at least one definitive operation for the disease. Forty-four (32%) patients had proctocolectomies and 65 (47%) have ileostomies. Associated manifestations of Crohn's disease occurred in a high proportion of patients; perianal disease in 78 (56%), intestinal fistulas in 45 (32%), extra-intestinal disease in 49 (35%). Six patients died of causes directly related to the disease. Specific complications tend to occur at definite times in the course of the disease. Crohn's disease is not a benign condition. There is a relentless progression of the disease and a high incidence of complications when patients are followed over a long period.

Irritable bowel syndrome. Progress in understanding and management. William J. Snape, Jr, MD. McGraw-Hill, *Postgraduate Medicine,* vol 81, no 4, March 1987, pp 291–294, 297–298.

In this article, Dr Snape paints an optimistic picture of what until recently had been a particularly elusive and refractory disease. Irritable bowel syndrome is now known to result from abnormalities in smooth muscle function, although multiple factors may be involved. Treatment still includes dietary fiber, but pharmacologic therapy has advanced remarkably. Besides anticholinergic drugs, calcium channel blockers and nitrates are being tried.

Interferons and their clinical value. D.A. J. Tyrrell. Copyright 1987 The University of Chicago, *Reviews of Infectious Diseases,* vol 9, no 2, March-April 1987, pp 243–249.

Interferons were discovered from their antiviral effects. It is now known that they are the products of families of genes found in many vertebrate species and that they bind to cell surfaces and produce a range of effects, varying from an antiviral state to increased expression of tissue transplantation antigens, decreased cell division, and modified immune responses, among others. Interferons are induced by exposure to viruses and double-stranded RNA, and one class, gamma interferon, is a lymphokine produced after a mitogenic or antigenic stimulus. The genes for human alpha, beta, and gamma interferons have been cloned and sequenced, and some have been expressed. When given parenterally to humans, interferons cause signs and symptoms such as fever, tachycardia, and malaise, and they may well be responsible for symptoms of this sort in viral infections. Preparations of natural and recombinant alpha interferon have been shown to be active in prophylaxis and treatment of certain viral infections.

Tuberculosis in hospital personnel. Loraine E. Price, BSN, CIC; William A. Rutala, PhD, MPH; and Gregory P. Samsa, MS. SLACK Incorporated, *Infection Control,* vol 8, no 3, 1987, pp 97–101.

Tuberculosis (TB) skin testing practices and the prevalence and inherent risk of TB infection among hospital employees in 167 North Carolina (NC) hospitals were determined from a 79% (132/167) response to a tuberculosis screening questionnaire. Preemployment TB skin testing was performed by 98% of responding hospitals, primarily (87%) by the Mantoux method. TB skin test reactions of ≥10 mm were interpreted as significant by 72% and at the appropriate time interval of 48 to 72 hours after administration by 80%. The booster test was routinely performed in 12% of the hospitals. TB infection prevalence among new employees during 1983 was 6.3% (260/4,137) in 30 hospitals supplying these data. A positive correlation was noted between employee infection prevalence and county TB case rates ($P = .014$). Skin test conversion data from 56 hospitals across the state revealed a five-year mean conversion rate of 1.14% among 71,253 personnel. There was an association between the incidence of TB in the general population and the frequency of conversions among hospital employees in corresponding geographical regions. Similarly, the incidence of TB among approximately 100,000 NC hospital employees in 1983 and 1984 was less than the incidence in the general population. These associations suggest that the incidence of TB infection among hospital personnel may reflect the prevalence of tuberculosis in the community rather than an occupational hazard. Annual TB skin testing of hospital employees may be justified in eastern North Carolina where the incidence of tuberculosis (22–20 cases/100,000) is greater than the national average and where the risk of new TB infection among hospital employees is relatively common (≥1.5%).

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

JUST ARRIVED:

1987 325 Convertible

The first BMW Convertible offered in over three decades. Its 168-h.p. engine has 39% more power than 1986 3-series.

JUST ARRIVED:

1987 7-Series

An entirely new luxury sedan for 1987. From its aerodynamic exterior to its hand-sewn leather interior, this car's impact will be measured in decades, not years.

JUST ARRIVED:

1987 M-Series

The three new M-Series BMW's represent the two fastest production sedans available in the U.S., (M3 and M5), and a limited edition sports coupe (M6) with such features as a hand built 256-h.p. engine and hand tuned suspension.

Over 150 new BMW's to choose from. All with ABS brakes and 3 year/36,000 mile warranty.

The New BMW

BMW CENTER

FACTORY AUTHORIZED.
4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

DR VANDERPOOL
A president on the run

David Vanderpool, MD, Dallas, is the 1987–1988 president of the Texas Medical Association.

David Vanderpool, MD, expects to "run harder" to keep up with the demands of his position as Texas Medical Association's 1987–1988 president. While maintaining his surgical practice and serving as clinical associate professor of surgery in Dallas, Dr Vanderpool also will be reckoning with a myriad of complex issues that face Texas physicians.

Dr Vanderpool is a Dallas native and a graduate of Abilene Christian College and The University of Texas Southwestern Medical School. His postgraduate training was at Confederate Memorial Medical Center, Shreveport, La, and Parkland Memorial Hospital and The University of Texas Southwestern Medical School.

A past president of the Dallas County Medical Society, Dr Vanderpool has been a member of several TMA committees and is an alternate delegate to the American Medical Association. He also has served as the association's secretary.

He is married to the former Marjorie Louise Martin, and they are the parents of David Martin Vanderpool, MD, who begins his surgery residency in July.

In a recent interview, Dr Vanderpool considered the challenges facing him as president.

Texas Medicine: What do you consider to be the major issues facing medicine in Texas?

Dr Vanderpool: The biggest issues are related to interference in the practice of medicine by third parties, which include insurance companies, the government, and peer review organizations.

Related to that interference is the practice of medicine by nonphysicians. Third party payers are telling doctors how to practice. And, then of course there are a lot of groups who want to practice medicine, but are not adequately trained to do so—independent nurse practitioners, pharmacists who want to prescribe medications, physical therapists who want to practice independently, psychologists who want to admit patients to hospitals and pratice independently. There are a whole host of people who want to practice medicine without going to medical school.

The physician supply is another big issue and one that's going to have to be dealt with—the problems caused by an oversupply of physicians.

Also, we're going to have to deal with the extreme complexity of Medicare's maximum allowable charge regulations on nonparticipating physicians. It's so complex that many physicians have decided to participate just because they don't understand how they can do otherwise, and they're afraid they'll violate the law if they don't participate.

I think problems between groups of physicians are emerging for several reasons—the "town and gown" conflict and problems among various health care delivery systems and county medical societies. These issues are especially painful because we are fighting ourselves.

Texas Medicine: Is tort reform an ongoing issue, or do you think it will be resolved in the 70th Texas Legislature?

Dr Vanderpool: I think we're going to get a lot out of this session. It's not over till it's over, but I think we're going to get a lot out of it. The governor, the lieutenant governor, the speaker, and many, many legislators are committed to tort reform. I don't think we'll get everything we want, and there will be some ongoing problems. Even if we get everything we want out of the legislature, we need a constitutional amendment to go to the people of the state. It well may be that some of these things will have to be achieved in special sessions. It is an ongoing issue.

Texas Medicine: In relation to those issues, what goals have you set for your presidential term?

Dr Vanderpool: Above all, we need to do the best possible job of representing *all* of the doctors in Texas. And, I think increasing the involvement of specialty societies and specialty society physician in the umbrella organization is important. Even though we're going more or less the same direction, we've not always been helpful to each other.

We also need to integrate certain special groups more fully into the mainstream of our organization—women, young physicians, foreign medical graduates.

Texas Medicine: Have you set any goals related to public health?

Dr Vanderpool: Well, these goals ultimately affect the public health. The reason that we exist, of course, is to provide for our patients. And, if we're going to maintain that tradition, we have to do what's best for the patient. In the long run, that is in our own interest.

Indigent health care is a continuing issue and is more serious now because of problems in state funding. A number of these issues are made more serious because of the budgetary problems that the state finds itself in. This is a real problem in indigent health care.

Texas Medicine: What activities would you would like to see the Physician Advocacy Committee pursue to achieve a better relationship with the Texas Medical Foundation?

Dr Vanderpool: I want to commend the committee in the highest way I know how. They've been working for just a few months, and they're going in the right direction. They're already increasing the professional review organization's awareness of educational approaches that salvage physicians, rather than exclude them and punish them.

I want to continue this committee. It's an ad hoc committee, but I want to reappoint it because it's going to be needed indefinitely, and it's performing an extremely important role.

Texas Medicine: What are you looking forward to during the coming year?

Dr Vanderpool: This is going to be an interesting year. Of course, there's an old Chinese curse that says, "May you live in interesting times," but it's going to be an exciting year. The legislature will still be in session when I take office (May 16, 1987), and may continue to be in special sessions for a number of months. I'm looking forward to the challenge of representing the TMA and Texas physicians before the public and legislative bodies.

Texas Medicine: What are you apprehensive about?

Dr Vanderpool: Well, it's just an enormous job. I don't think any one person can do this job completely. It's going to take the work of many, many Texas physicians and, ideally, all Texas physicians to get the job done. And, the problems that we have arrayed before us are tremendous problems. So, we have to be apprehensive about those.

It's going to take a lot of time, of course, and I intend to continue practicing. I think that's important. If I'm going to represent practicing physicians, I have to be one.

Texas Medicine: Why did you accept this office?

Dr Vanderpool: Well, I was, of course, active in the House of Delegates, was secretary of the TMA. A number of my peers encouraged me to seek the presidency of the TMA, and I acceded to their wishes.

Texas Medicine: You mentioned the demands the office will make on your time. How will those demands affect your family and your practice?

Dr Vanderpool: Fortunately, we don't have any children at home any more. And, my wife is understanding—she will travel with me quite a bit. It means that I'll just have to run harder and cut out some other activities, but I think it can be accommodated.

I have three partners, and they're very supportive. I just hope I don't take advantage of them. They're excellent doctors, so that's going to be a help this year.

Texas Medicine: Dr Sammons recently told TMA members that organized medicine is ignoring new realities—the increase in the number of women physicians and employed physicians. Do you agree that that organized medicine has ignored those developments?

Dr Vanderpool: To some degree, I think that's true. I see the TMA as being a very progressive organization, though. We were one of the first states to have a hospital medical staff section. We have been extremely active in seeking women to be leaders, and young physicians to be leaders. Most of our officers this year are women physicians. We have, of course, some very outstanding young physicians who are doing a good job at the state and national levels. So, I think we have not done all we can do, but I believe that the TMA has been very progressive in this area.

Texas Medicine: How can physicians meet the challenges they face?

Dr Vanderpool: By showing concern and care for our patients and for the profession. We have to look to the high ethical standards that have brought us where we are now. These standards have to be emphasized. We have to put our patients' and the public's benefit before our own. If we do, we'll be needed so much that no one will want to get rid of us. If we don't, no amount of lobbying or legislative activity will help us to keep what we're holding on to.

AIM HIGH

AIR FORCE MEDICINE

AN ATTRACTIVE ALTERNATIVE TO PRIVATE PRACTICE

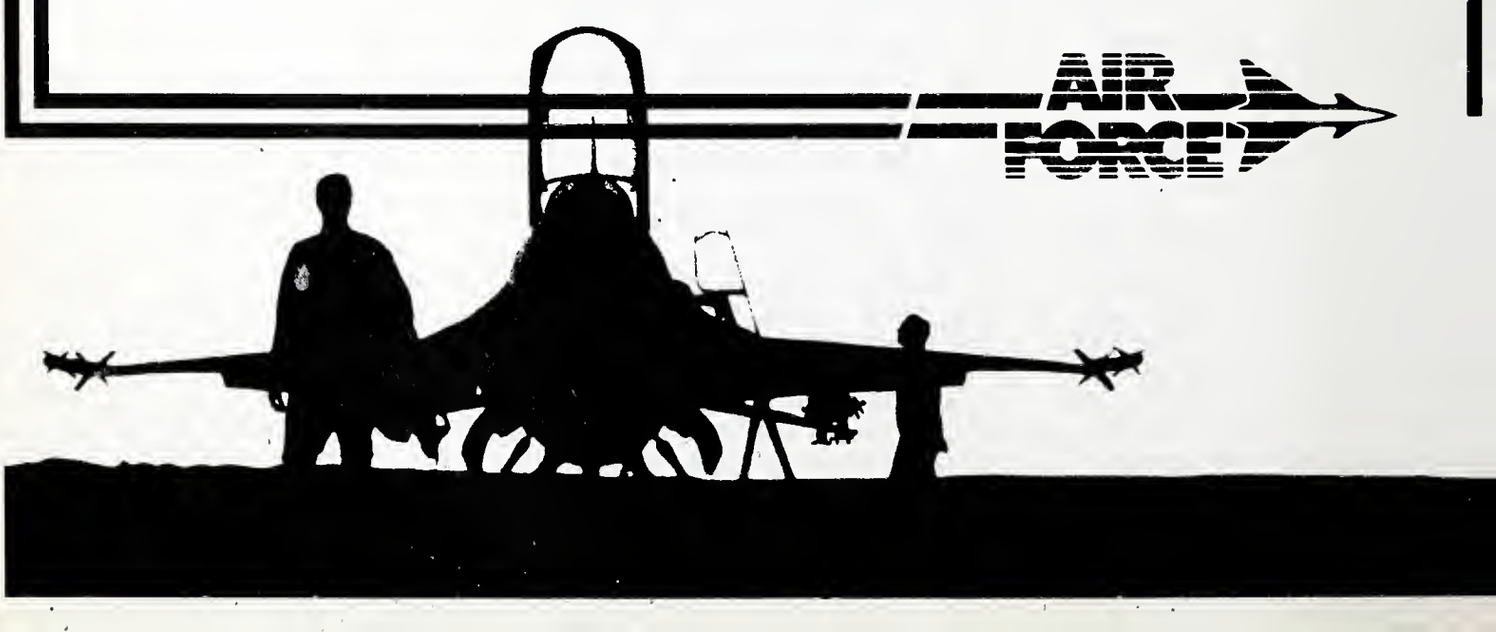
Are you sick of the paperwork battle? Are you more familiar with the latest computer technologies instead of those of your specialty? Are supply and equipment problems getting you down?

Join the Air Force medical team. Concentrate on your medical practice. Leave the paperwork hassle to others. We use the group practice system of health care. It allows maximum patient/physician contact with a minimum of administrative responsibilities.

You'll get to use those skills you've gained through the years of education; to stay up with new methods and techniques; and, if qualified, to specialize.

Our superior employment and benefits package make Air Force medicine an attractive alternative to private practice. Find out how you can be a part of the Air Force health care team. Call

AIR FORCE



CONFIRMED

CONFIRMED BY CLINICAL EVIDENCE

ZANTAC® 150 h.s.

ranitidine HCl/Glaxo 150 mg tablets

EFFECTIVE MAINTENANCE THERAPY

for healed duodenal ulcer patients

See last page for references and
Brief Summary of Product Information.

Glaxo / ROCHE

CONFIRMED

In two randomized, double-blind, and well-controlled clinical trials, ZANTAC 150 mg h.s. significantly superior to cimetidine 400 mg h.s. for maintenance therapy in healed duodenal ulcers.

Percent of patients with observed duodenal ulcer recurrence

		0-4 months	0-8 months	0-12 months	No. patients
USA[1]	ranitidine 150 mg h.s.	9%	14%*	16%†	60
	cimetidine 400 mg h.s.	23%	34%	43%	66
UK, Ireland, Australia[2]	ranitidine 150 mg h.s.	8%‡	14%‡	23%‡	243
	cimetidine 400 mg h.s.	21%	34%	37%	241

*p=0.02
†p=0.01
‡p≤0.004
%=life-table estimates
All patients were permitted prn antacids for relief of pain.

These two trials used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Convenient once-a-night dose with a low incidence of side effects[3]

Headache, sometimes severe, seems to be related to ranitidine administration. Other side effects have been reported; for a complete listing, see the **ADVERSE REACTIONS** section in the Brief Summary.

No significant interference with the hepatic cytochrome P-450 enzyme system at recommended doses

ZANTAC 150 mg has no significant drug interactions with theophylline, phenytoin, or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications that decrease gastric acidity are administered.

Zantac® 150
ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime
for maintenance

See next page for references and
Brief Summary of Product Information.

Glaxo / ROCHE®

CONFIRMED

Zantac® 150

ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime for maintenance therapy in healed duodenal ulcer patients

References:

1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastroenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bardhan KD, et al: Ranitidine and cimetidine in prevention of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.
3. Data available on request, Glaxo Inc.

ZANTAC® 150 Tablets
(ranitidine hydrochloride)
ZANTAC® 300 Tablets
(ranitidine hydrochloride)

BRIEF SUMMARY OF PRODUCT INFORMATION

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC® product labeling.

INDICATIONS AND USAGE: ZANTAC® is indicated in:

1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer.** Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD).** Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix® may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC® administration. Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION. Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

© Copyright 1983, Glaxo Inc. All rights reserved. October 1986

Glaxo

Glaxo Inc.
Research Triangle Park, NC 27709

© 1987, Glaxo Inc.

The indigent patient—yours, mine, ours?

Prior to 1983 only Texas hospitals supported with public funds were statutorily obligated to provide emergency services to anyone, regardless of ability to pay, whom a licensed physician on the medical staff diagnosed as needing such services. However, court-made law in other states had held that private hospitals had a similar obligation if they operated an emergency room. The courts concluded uniformly that patients rightfully could rely on a hospital for emergency treatment if the hospital held itself out as being able to treat emergencies. In recognition of this social fact, statutory language was passed requiring all general hospitals—public or private—to provide emergency services if they are available at the hospital. An unforeseen result of these statutory amendments was the increase in transfer of indigent patients to public or charity hospitals in order to avoid the codified responsibility of caring for these patients. This practice has been called "dumping." In the attempt to alleviate the problem this practice caused, the 69th legislature amended the Texas Hospital Licensing Law (1) to establish standards for transferring to another hospital and physician a patient needing emergency services. The following article outlines the law and rules regarding the transfer of patients and examines physicians' ethical duties toward the patient without "the ability to pay."

The law

The primary reason why some hospitals are forced to attempt to limit their responsibility for admitting or accepting the transfer of indigent patients is the inadequate funding of indigent health care (2). The costs for needed care can bankrupt the hospitals. The legislature, in enacting the Indigent Health Care and Treatment Act, (3) requires each county to provide health care assistance to each eligible resident (generally an Aid to Families with Dependent Children Medicaid eligible person) of that county who does not reside within an area in which a public hospital or hospital district has a legal obligation to serve. However, many indigent persons served by public and private hospitals do not meet the criteria to have any of the aforementioned entities pay for their health care. Notably, many illegal aliens deliver babies or otherwise receive treatment at Texas hospitals. In such cases, the hospital and physician involved bear the total cost of this health care for society (4).

In an effort to manage these unreimbursed expenses, many hospitals dumped those patients on public or charity hospitals by transferring the patients, without prior contact and acceptance with the hospital or physician. The Texas Legislature spoke to this problem by amending the Hospital Licensing Law to pemit regulation of hospital patient transfers (1). The law required the Texas Department of Health (TDH) to adopt rules (5) to implement patient transfer policies. The rules provided for patient transfers in a medically appropriate manner from physician to physician, as well as from hospital to hospital. The rules provide for: (1) notification to the receiving hospital prior to the transfer and confirmation by that hospital that the patient meets that hospital's admissions criteria relating to appropriate bed, physician, and other services necessary to treat the patient; (2) the use of medically appropriate life support measures that a reasonable and prudent physician in the same or similar locality exercising ordinary care would use to stabilize the patient prior to transfer and to sustain the patient during transfer; (3) the use of appropriate personnel and equipment that a reasonable and prudent physician in the same or similar locality exercising ordinary care would use for the transfer; and (4) the transfer of all necessary records for continuing the care of the patient.

The rules limited hospital policies that would require the consent of the patient or personal representative of a patient prior to transfer. It was hoped that each hospital would implement its transfer policies by adopting transfer agreements with other hospitals (1).

To enforce the implementation of the transfer rules, several sections were added to the Hospital Licensing Law (1). Section 9B allows the licensing agency (TDH), in the case of a violation of the transfer rules, to petition a district court in the county in which the violation occurred for the assessment and recovery of civil penalties. The penalty can go as high as $1,000 for each day of violation *and* for each act of violation. The licensing agency also may petition the district court for a temporary order to restrain a continuing violation that immediately threatens the health and safety of the hospital patient.

Section 9C allows a person harmed by the failure of a hospital to adopt, implement, or enforce a patient transfer policy in a timely manner to petition a district court of the county in which the person resides (or, if out of state, a district court of Travis County) for injunctive relief. The injured person may pursue remedies for civil damages existing under current common law.

The state government is not alone in requiring patient transfer policies. The federal government now also requires transfer policies as a condition of participation in the Medicare system for skilled nursing facilities and hospitals (6). These transfer requirements are quite similar to those in Texas.

The rules

On April 1, 1986, the TDH rules governing patient transfers became effective (5). They require hospitals to adopt patient transfer policies. These policies must prohibit discrimination against indigent patients and provide for disclosure of patients' rights concerning transfers, patient evaluations prior to transfer, access to appropriate hospital personnel and physician staff members, and eligibility and payment information.

A hospital may transfer patients requiring emergency services for medical reasons only. The exceptions to this rule include patients who are required to seek such services from a "mandated provider" (7), patients with contractual obligations with a particular provider, and patients who request a specific physician or hospital to provide the care needed. Such exceptions are authorized if the transfer will not harm the patient. Non-emergency transfers are expected to occur on a routine

basis in the hopes of obtaining optimal care for patients at appropriate or specialized facilities.

The TDH rules give physicians very specific duties and obligations (8). The transferring physician must determine and order life support measures that are medically appropriate to stabilize the patient prior to transfer and to sustain the patient during transfer. The physician is to determine and order the use of appropriate personnel and equipment for the transfer. The standard of care is that which a reasonable and prudent physician exercising ordinary care in the same or similar locality would use for the transfer.

Prior to the transfer, the physician must personally examine and evaluate the patient to determine the patient's medical needs and to assure that proper transfer procedures are used. As with many rules, exceptions do exist. If the physician on call determines that an immediate transfer of the patient is medically appropriate and that the time required to conduct a personal examination and evaluation of a patient will unnecessarily delay the transfer to the detriment of the patient, then the examination and evaulation need not be performed and the physician may order a transfer by telephone or radio (9).

The rules require that prior to transfer the transferring physician must secure a receiving physician and a receiving hospital that are not only appropriate to the patient's medical needs, but also willing to accept responsibility for the patient's treatment and hospital care. Finally, the rules require the physician to send all the relevant and available medical records with the patient or as soon after as is practical. The patient's medical record must include a memorandum of transfer signed by transferring and receiving authorities.

Enforcement

Enforcement can be accomplished in a number of ways. The hospital is required to govern itself and set transfer policies with the advice of the medical staff. Failure to follow proper procedures could lead to limitation of privileges (10). The hospital itself is subject to the loss of its license and to civil penalties for failure to adopt, implement, and carry out a transfer policy. Of course a person aggrieved by a failure of a transfer system may bring an injunctive action as well as civil action. The courts have been willing to critically examine the failure of medical staffs and hospitals to cooperate in performing their duties and to second guess the decision reached when the duties and responsibilities were not carried out in accordance with the adopted and approved bylaws (11).

Enforcement of a particularly unfortunate variety arises when TDH finds that a transfer policy is not in place or is not being followed at a hospital. Because of the absence of the transfer policy, two adverse results can occur. The first is that the license of the hospital is placed in jeopardy. The second is that Medicare certification could be denied because a condition of participation is not being met. If Medicare certification is denied, Medicaid participation also will be denied. For many hospitals this would be a serious financial consequence.

Enforcement by state and federal authorities also might be invoked in dealing with a new problem that has arisen concerning patient transfer—"reverse dumping." Reverse dumping is the refusal to accept the transfer of an indigent patient when the hospital normally would accept such a patient. The desire to engage in reverse dumping should be resisted. As with dumping, the hospital risks being found out of compliance with a condition of participation in the Medicare program. Additionally, the physician or hospital requested to attend a patient needing their services in an emergency situation might be considered as unlawfully having refused emergency treatment under the state law (12).

Ethical considerations

Regardless of statutorily required compliance with transfer rules, the ethical physician would adhere to the Texas Medical Association's Board of Councilors' opinion concerning patient transfers. The Board of Councilors has stated:

> Physicians should not refer patients to other physicians or to any other provider of health care services unless they are confident that the needed services will be performed competently and in accordance with accepted scientific standards and legal requirements. Even in an emergency, the referring physician should make every attempt to ascertain the identity and capabilities of the physician who is being asked to assume responsibility for the patient's care. The attending physician who refers simply to a hospital or to another institution, no matter what its reputation, is abrogating his or her professional responsibility to the patient. If a hospital encourages such referral patterns by contacting physicians in distant communities and offering what may be high-quality medical transportation services, the hospital's medical staff should point out the ethical issues involved (13).

Conclusion

Legal and ethical considerations direct the physician and the hospital toward an open and honest relationship with patients, particularly indigent patients. Patient care can only suffer when a hospital or physician engages in dumping or reverse dumping. The failure of an adequate patient transfer policy brings with it a great risk not only to patients but also to hospitals which may lose their licenses and their ability to participate in the Medicare program. And certainly, if the legislature perceives a continuing problem, new legislation to "resolve" the issue of patient transfer will be in the offing.

C. J. FRANCISCO, JD
TMA Attorney

REFERENCES

1. Tex Rev Cit Stat art 4437f (Vernon Supp 1987).
2. Friedman E: Problems plaguing public hospital: uninsured patient transfer, tight funds, mismanagement, and misperception. JAMA 257(14):1850–1857.
3. Tex Rev Civ Stat Ann, art 4438f (Vernon Supp 1987).
4. Wilcox DP: Charity care—who pays for it? Tex Med 80(3):62–64, 1984).
5. Tex Dept of Health, 10 Tex Reg 4263 (1985), adopted, 11 Tex Reg 603 (1986) (amending 25 Tex Admin Code, sec 133.21) (adopting by reference the rules contained in the department publication

entitled, "Hospital Licensing Standards," as amended April 1, 1986, to become effective April 1, 1986).

6. 42 USCA sec 1395cc (1986), Responsibilities of Medicare Hospitals in Emergency Cases; Condition of Participation for Skilled Nursing Facilities Medicare and Medicaid Guide (CCH), p 12,380; p 12,400; and p 19,947 (Oct 1, 1977).

7. Tex Rev Civ Stat Ann, art 4438f, secs 3.03–3.05 and 11.04–11.06 (Vernon Supp 1987).

8. Tex Dept of Health, Hospital Licensing Standards, rule 11.2.6 et seq (April 1, 1986).

9. Tex Dept of Health, Hospital Licensing Standards, rules 11–2.24 and 11–2.6.4 (April 1, 1986).

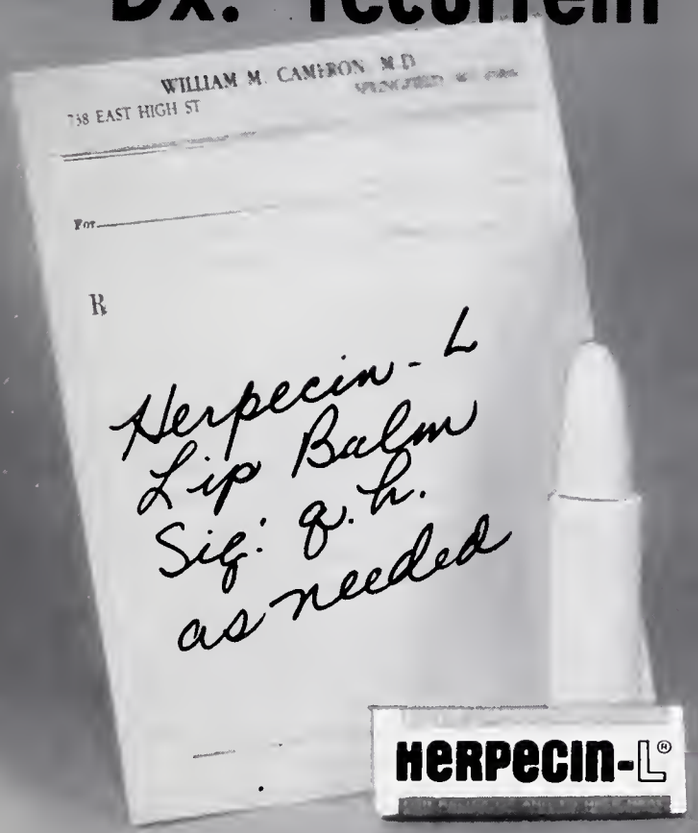
10. Wilcox DP: Hospital medical staff bylaws—trends and pitfalls. Tex Med 81(11):68–70, 1985; Alt HA: Due process protection for Texas physicians. Tex Med 81(10):68–70, 1985.

11. Giles v Breaux, 106 SW2d 608 (La 1964).

12. Tex Rev Civ Stat Ann, art 4438a (Vernon Supp 1987). See also Young MG: Physicians and the hospital emergency room. Tex Med 80(7):65–67, 1984; Wilcox DP: Hospital emergency rooms—new legal requirements. Tex Med 79(11):73–75, 1983; Wilcox DP: The physician and emergency room patients. Tex Med 77(3):72–73, 1981.

13. Current Opinions of the TMA Board of Councilors, 1984, p 9.

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **iow risk/high benefits.**" MD, FL

"Used at **prodromai symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(in clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: **CAMPBELL LABORATORIES, INC.**, P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

R.H. Hook

Robert H. Hook, MD, a long-time resident of Texas City, died Feb 8, 1987. He was 64.

A native of Uniontown, Pa, Dr Hook attended Penn State College and The University of Texas at Austin. During World War II, he served as a bomber pilot in the US Air Force. He continued to serve through the Korean War, attaining the rank of major and receiving the Distinguished Flying Cross.

Following military discharge, Dr Hook attended the University of Texas Medical Branch at Galveston, graduating in 1958. He served his internship at Robert B. Green Memorial Hospital in San Antonio. In 1960 he moved to Texas City and practiced there until his retirement in 1986. After his retirement, he moved to Sunrise Beach, Tex.

During 1978–1986, Dr Hook served as company commander with the 111th Medical Batallion of the Army National Guard, from which he retired with the rank of lieutenant colonel.

He is survived by his wife, Dorothy Hook, Sunrise Beach; son, Robert H. Hook, Jr, Austin; daughters, Jackie Anderson, Athens, Tex, and Terri Bagwell, Round Rock, Tex; brother, Thomas Hook, Dallas; and three grandchildren.

C.S. Jones

Clyde S. Jones, MD, 31, chief surgical resident, Baylor College of Medicine in Houston, died Feb 8, 1987.

Dr Jones, a native of Wichita Falls, Tex, was a 1982 graduate of The University of Texas Medical School at Houston. He remained in Houston for a residency at Baylor College of Medicine. He was in his fifth year of surgical residence at the medical school's affiliated hospitals, where he had been accepted as a vascular fellow to begin in July.

Surviving family members include his parents, Dr and Mrs Eldo Jones, Wichita Falls; sisters, Patrice Easterly, Houston, and Kristen Holland, Austin, Tex; and brother, Scott Jones, Austin.

G.V. Pazdral

George V. Pazdral, MD, an honorary member of Texas Medical Association, died Feb 16, 1987, at age 81.

Dr Pazdral had served for 50 years as a general practitioner in Somerville, Tex, as a Santa Fe Railroad physician, and as city health officer in Somerville.

Born in Fayetteville, Tex, and raised in West, Tex, Dr Pazdral received his bachelor's degree from Baylor University in 1927. After teaching biology and science in Orange, Tex, for a year, he enrolled at The University of Texas Medical Branch at Galveston. He graduated in 1932 and completed his internship at Santa Fe Hospital in Temple, Tex. He then moved to Somerville and practiced there until his retirement in 1983.

Dr Pazdral served as vice-president of the Texas Medical Association in 1969.

Surviving family members include his wife, Lucille Brown Pazdral, Somerville; son, George Pazdral, MD, Austin; daughter, Julia Fuller, Carrollton, Tex; and one granddaughter.

M. Rumph

Mal Rumph, MD, a longtime Fort Worth physician and life member of the Texas Medical Association, died Feb 27, 1987. He was 79.

Dr Rumph was born in Mansfield, Tex, on April 25, 1907. He received a bachelor of arts degree from The University of Texas at Austin in 1928. In 1931 he graduated (AOA) from The University of Texas Medical Branch at Galveston and then served an internship at Grady Hospital in Atlanta, Ga. Following a residency in obstetrics and gynecology in Atlanta, Dr Rumph began his practice in Fort Worth in 1934. He received his fellowship in the American College of Surgeons in October 1949. Dr Rumph continued his Fort Worth practice until his retirement in 1984.

Dr Rumph was a past president of the Texas Medical Association District 13 and the Tarrant County chapter of the Texas Academy of Family Physicians. In 1983, his colleagues in the Tarrant County Medical Society awarded him the Gold-Headed Cane Award.

Surviving family members include his wife, Elizabeth Rumph, Fort Worth; son, David Ross Rumph, MD, Enid, Okla; daughter, Elizabeth Ann Jones, Houston; seven grandchildren; and four great-grandchildren.

J.D. Walker, Sr

Joseph Dudgeon Walker, Sr, MD, an honorary member of Texas Medical Association, died Feb 1, 1987. He was 93.

Dr Walker was born in New Bethlehem, Pa, and was a 1922 graduate of the University of Oklahoma School of Medicine. He was a longtime Texas physician and surgeon, beginning a general practice in a community near Conroe and in 1922 moving his practice to Houston. He later specialized in the practice of ophthalmology. Dr Walker retired in 1982 and moved to Bastrop, Tex.

Survivors include his sons, Joe Dudgeon Walker, Jr, and Weyman H. Dunlap Walker, both of Houston, and Hayne Nelms Walker, El Paso; three grandchildren; and two great-grandchildren.

H.H. Ziperman

H. Haskell Ziperman, MD, a San Antonio surgeon, died Feb 16, 1987.

Dr Ziperman, 71, was a native of New York City. He was a 1937 graduate of Indiana University in Bloomington and a 1941 graduate of Indiana University School of Medicine in Indianapolis, having been elected to Phi Beta Kappa and Alpha Omega Alpha. After an internship at the same university, Dr Ziperman served in the US Army Air Corps and then returned to Indiana University for a surgical residency. During 1950–1973, he served in the US Army Medical Corps. Between 1973 and 1976, Dr Ziperman served as director of the department of bio-engineering at Southwest Research Institute, San Antonio. During 1976–1986, he was director of admissions at San Antonio State Hospital.

Dr Ziperman is survived by his wife, Peg Ziperman, San Antonio; son, Don B. Ziperman, MD; and grandchildren, Lisa Ziperman and Karen Ziperman, all of Indianapolis, Ind.

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Please indicate six key words for indexing.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine.*

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within four months of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine.*

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

R. H. HOOK
Texas City, 1922–1987

C. S. JONES
Houston, 1955–1987

G. V. PAZDRAL
Somerville, 1905–1987

M. RUMPH
Fort Worth, 1907–1987

J. D. WALKER, SR
Houston, 1893–1987

H. H. ZIPERMAN
San Antonio, 1915–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audiovisual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student	$ 5.00	☐ Patron	$ 100.00
☐ Sustaining	$15.00	☐ Life	$1,000.00
☐ Subscribing	$25.00		

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

Mean,

Powerful against susceptible pathogens.*

lean &

Easy on tight budgets.

clean.

Gentle to patients (generally well tolerated).

The one antimicrobial that belongs on every formulary.

Once-a-day Rocephin® ROCHE IV·IM ceftriaxone sodium/Roche

* ROCEPHIN is indicated in the following infections: bacterial septicemia, bone and joint, intra-abdominal, lower respiratory tract, skin and skin structure, urinary tract, bacterial meningitis and gonorrhea. Please see summary of product information on adjacent page for indicated susceptible organisms.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

Please see adjacent page for summary of product information.

Rocephin® IV·IM

ceftriaxone sodium/Roche

Before prescribing, please consult complete product information, a summary of which follows:

MICROBIOLOGY The bactericidal activity of ceftriaxone results from inhibition of cell wall synthesis Ceftriaxone has a high degree of stability in the presence of beta-lactamases, both penicillinases and cephalosporinases, of gram-negative and gram-positive bacteria Ceftriaxone is usually active against the following microorganisms *in vitro* and in clinical infections (see Indications and Usage)

GRAM-NEGATIVE AEROBES. Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae (including ampicillin-resistant strains), *H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *Neisseria gonorrhoeae* (including penicillinase and nonpenicillinase producing strains), *Neisseria meningitidis, Proteus mirabilis, Proteus vulgaris, Morganella morganii* and *Serratia marcescens*

Note Many strains of the above organisms that are multiply resistant to other antibiotics, e.g, penicillins, cephalosporins and aminoglycosides, are susceptible to ceftriaxone sodium

Ceftriaxone is also active against many strains of *Pseudomonas aeruginosa*

GRAM-POSITIVE AEROBES Staphylococcus aureus (including penicillinase-producing strains) and *Staphylococcus epidermidis* (Note methicillin-resistant staphylococci are resistant to cephalosporins, including ceftriaxone), *Streptococcus pyogenes* (Group A beta-hemolytic streptococci), *Streptococcus agalactiae* (Group B streptococci) and *Streptococcus pneumoniae* (Note Most strains of enterococci, *Streptococcus faecalis* and Group D streptococci are resistant)

Ceftriaxone also demonstrates *in vitro* activity against the following microorganisms, although the clinical significance is unknown

GRAM-NEGATIVE AEROBES Citrobacter freundii, Citrobacter diversus, Providencia species (including *Providencia rettgeri*), *Salmonella* species (including *S typhi*), *Shigella* species and *Acinetobacter calcoaceticus*

ANAEROBES. Bacteroides species, *Clostridium* species (Note most strains of *C difficile* are resistant)

SUSCEPTIBILITY TESTING Standard susceptibility disk method Quantitative methods that require measurement of zone diameters give the most precise estimate of antibiotic susceptibility One such procedure (Bauer AW, Kirby WMM, Sherris JC, Turck M Antibiotic Susceptibility Testing by a Standardized Single Disk Method, *Am J Clin Pathol* 45 493-496, 1966, Standardized Disk Susceptibility Test, *Federal Register* 39 19182-19184, 1974, National Committee for Clinical Laboratory Standards, Approved Standard ASM 2, Performance Standards for Antimicrobial Disk Susceptibility Tests, July 1975) has been recommended for use with disks to test susceptibility to ceftriaxone

Laboratory results of the standardized single-disk susceptibility test using a 30-mcg ceftriaxone disk should be interpreted according to the following three criteria

1 Susceptible organisms produce zones of 18 mm or greater, indicating that the tested organism is likely to respond to therapy
2 Organisms that produce zones of 14 to 17 mm are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e g, urine), in which high antibiotic levels are attained
3 Resistant organisms produce zones of 13 mm or less, indicating that other therapy should be selected

Organisms should be tested with the ceftriaxone disk, since ceftriaxone has been shown by *in vitro* tests to be active against certain strains found resistant to cephalosporin class disks

Organisms having zones of less than 18 mm around the cephalothin disk are not necessarily of intermediate susceptibility or resistant to ceftriaxone

Standardized procedures require use of control organisms The 30-mcg ceftriaxone disk should give zone diameters between 29 and 35 mm, 22 and 28 mm and 17 and 23 mm for the reference strains *E coli* ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853, respectively

DILUTION TECHNIQUES Based on the pharmacokinetic profile of ceftriaxone, a bacterial isolate may be considered susceptible if the MIC value for ceftriaxone is not more than 16 mcg/ml Organisms are considered resistant to ceftriaxone if the MIC is equal to or greater than 64 mcg/ml Organisms having an MIC value of less than 64 mcg/ml, but greater than 16 mcg/ml, are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e g, urine), in which high antibiotic levels are attained

E coli ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853 are also the recommended reference strains for controlling ceftriaxone dilution tests Greater than 95% of MICs for the *E coli* strain should fall within the range of 0 016 to 0 5 mcg/ml. The range for the *S aureus* strain should be 1 to 2 mcg/ml, while for the *P aeruginosa* strain the range should be 8 to 64 mcg/ml

INDICATIONS AND USAGE: Rocephin is indicated for the treatment of the following infections when caused by susceptible organisms

LOWER RESPIRATORY TRACT INFECTIONS caused by *Strep pneumoniae, Streptococcus* species (excluding enterococci), *Staph aureus, H influenzae, H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *E coli, E aerogenes, Proteus mirabilis* and *Serratia marcescens*

SKIN AND SKIN STRUCTURE INFECTIONS caused by *Staph aureus, Staph epidermidis, Streptococcus* species (excluding enterococci), *E cloacae, Klebsiella* species (including *K pneumoniae*), *Proteus mirabilis* and *Pseudomonas aeruginosa*

URINARY TRACT INFECTIONS (complicated and uncomplicated) caused by *E coli, Proteus mirabilis, Proteus vulgaris, M morganii* and *Klebsiella* species (including *K pneumoniae*).

UNCOMPLICATED GONORRHEA (cervical/urethral and rectal) caused by *Neisseria gonorrhoeae*, including both penicillinase and nonpenicillinase producing strains

PELVIC INFLAMMATORY DISEASE caused by *N gonorrhoeae*

BACTERIAL SEPTICEMIA caused by *Staph aureus, Strep pneumoniae, E coli, H influenzae* and *K pneumoniae*

BONE AND JOINT INFECTIONS caused by *Staph aureus, Strep pneumoniae, Streptococcus* species (excluding enterococci), *E coli, P mirabilis, K pneumoniae* and *Enterobacter* species

INTRA-ABDOMINAL INFECTIONS caused by *E coli* and *K pneumoniae*

MENINGITIS caused by *H influenzae, N meningitidis* and *Strep pneumoniae* Ceftriaxone has also been used successfully in a limited number of cases of meningitis and shunt infections caused by *Staph epidermidis* and *E coli*

PROPHYLAXIS The administration of a single dose of ceftriaxone preoperatively may reduce the incidence of postoperative infections in patients undergoing coronary artery bypass surgery

Although ceftriaxone has been shown to have been as effective as cefazolin in the prevention of infection following coronary artery bypass surgery, no placebo-controlled trials have been conducted to evaluate any cephalosporin antibiotic in the prevention of infection following coronary artery bypass surgery

SUSCEPTIBILITY TESTING Before instituting treatment with Rocephin, appropriate specimens should be obtained for isolation of the causative organism and for determination of its susceptibility to the drug Therapy may be instituted prior to obtaining results of susceptibility testing

CONTRAINDICATIONS: Rocephin is contraindicated in patients with known allergy to the cephalosporin class of antibiotics

WARNINGS: BEFORE THERAPY WITH ROCEPHIN IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE TO DETERMINE WHETHER THE PATIENT HAS HAD PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS, PENICILLINS OR OTHER DRUGS THIS PRODUCT SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS ANTIBIOTICS SHOULD BE ADMINISTERED WITH CAUTION TO ANY PATIENT WHO HAS DEMONSTRATED SOME FORM OF ALLERGY, PARTICULARLY TO DRUGS SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE THE USE OF SUBCUTANEOUS EPINEPHRINE AND OTHER EMERGENCY MEASURES

Pseudomembranous colitis has been reported with the use of cephalosporins (and other broad spectrum antibiotics), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with antibiotic use

ROCEPHIN® (ceftriaxone sodium/Roche)

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia Studies indicate a toxin produced by *Clostridium difficile* is one primary cause of antibiotic associated colitis Cholestyramine and colestipol resins have been shown to bind to the toxin *in vitro*

Mild cases of colitis respond to drug discontinuance alone Moderate to severe cases should be managed with fluid, electrolyte and protein supplementation as indicated

When the colitis is not relieved by drug discontinuance or when it is severe, oral vancomycin is the treatment of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile* Other causes of colitis should also be considered

PRECAUTIONS: *GENERAL* Although transient elevations of BUN and serum creatinine have been observed, at the recommended dosages, the nephrotoxic potential of Rocephin is similar to that of other cephalosporins

Ceftriaxone is excreted via both biliary and renal excretion (see Clinical Pharmacology) Therefore, patients with renal failure normally require no adjustment in dosage when usual doses of Rocephin are administered, but concentrations of drug in the serum should be monitored periodically If evidence of accumulation exists dosage should be decreased accordingly

Dosage adjustments should not be necessary in patients with hepatic dysfunction, however, in patients with both hepatic dysfunction and significant renal disease, Rocephin dosage should not exceed 2 gm daily without close monitoring of serum concentrations

Alterations in prothrombin times have occurred rarely in patients treated with Rocephin Patients with impaired vitamin K synthesis or low vitamin K stores (e g, chronic hepatic disease and malnutrition) may require monitoring of prothrombin time during Rocephin treatment Vitamin K administration (10 mg weekly) may be necessary if the prothrombin time is prolonged before or during therapy

Prolonged use of Rocephin may result in overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Rocephin should be prescribed with caution in individuals with a history of gastrointestinal disease, especially colitis

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY Carcinogenesis Considering the maximum duration of treatment and the class of the compound, carcinogenicity studies with ceftriaxone in animals have not been performed The maximum duration of animal toxicity studies was six months

Mutagenesis Genetic toxicology tests included the Ames test, a micronucleus test and a test for chromosomal aberrations in human lymphocytes cultured *in vitro* with ceftriaxone Ceftriaxone showed no potential for mutagenic activity in these studies

Impairment of Fertility Ceftriaxone produced no impairment of fertility when given intravenously to rats at daily doses up to 586 mg/kg/day approximately 20 times the recommended clinical dose of 2 gm/day

PREGNANCY Teratogenic Effects Pregnancy Category B Reproductive studies have been performed in mice and rats at doses up to 20 times the usual human dose and have no evidence of embryotoxicity, fetotoxicity or teratogenicity In primates, no embryotoxicity or teratogenicity was demonstrated at a dose approximately three times the human dose

There are, however, no adequate and well-controlled studies in pregnant women Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nonteratogenic Effects In rats, in the Segment I (fertility and general reproduction) and Segment III (perinatal and postnatal) studies with intravenously administered ceftriaxone, no adverse effects were noted on various reproductive parameters during gestation and lactation, including postnatal growth, functional behavior and reproductive ability of the offspring, at doses of 586 mg/kg/day or less

NURSING MOTHERS Low concentrations of ceftriaxone are excreted in human milk Caution should be exercised when Rocephin is administered to a nursing woman

PEDIATRIC USE Safety and effectiveness of Rocephin in neonates, infants and children have been established for the dosages described in the Dosage and Administration section

ADVERSE REACTIONS: Rocephin is generally well tolerated In clinical trials, the following adverse reactions, which were considered to be related to Rocephin therapy or of uncertain etiology, were observed

LOCAL REACTIONS—pain, induration or tenderness at the site of injection (1%) Less frequently reported (less than 1%) was phlebitis after I V administration

HYPERSENSITIVITY—rash (1 7%) Less frequently reported (less than 1%) were pruritus, fever or chills

HEMATOLOGIC—eosinophilia (6%), thrombocytosis (5 1%) and leukopenia (2 1%) Less frequently reported (less than 1%) were anemia, neutropenia, lymphopenia, thrombocytopenia and prolongation of the prothrombin time

GASTROINTESTINAL—diarrhea (2 7%) Less frequently reported (less than 1%) were nausea or vomiting, and dysgeusia

HEPATIC—elevations of SGOT (3 1%) or SGPT (3 3%) Less frequently reported (less than 1%) were elevations of alkaline phosphatase and bilirubin

RENAL—elevations of the BUN (1 2%) Less frequently reported (less than 1%) were elevations of creatinine and the presence of casts in the urine

CENTRAL NERVOUS SYSTEM—headache or dizziness were reported occasionally (less than 1%)

GENITOURINARY—moniliasis or vaginitis were reported occasionally (less than 1%)

MISCELLANEOUS—diaphoresis and flushing were reported occasionally (less than 1%)

Other rarely observed adverse reactions (less than 01%) include leukocytosis, lymphocytosis, monocytosis, basophilia, a decrease in the prothrombin time, jaundice, glycosuria, hematuria, bronchospasm, serum sickness, abdominal pain, colitis, flatulence, dyspepsia, palpitations and epistaxis

DOSAGE AND ADMINISTRATION: Rocephin may be administered intravenously or intramuscularly The usual adult daily dose is 1 to 2 gm given once a day (or in equally divided doses twice a day) depending on the type and severity of the infection The total daily dose should not exceed 4 grams

For the treatment of serious miscellaneous infections in children, other than meningitis, the recommended total daily dose is 50 to 75 mg/kg (not to exceed 2 grams), given in divided doses every 12 hours

Generally, Rocephin therapy should be continued for at least two days after the signs and symptoms of infection have disappeared The usual duration is 4 to 14 days, in complicated infections longer therapy may be required

In the treatment of meningitis, a daily dose of 100 mg/kg (not to exceed 4 grams), given in divided doses every 12 hours, should be administered with or without a loading dose of 75 mg/kg

For the treatment of uncomplicated gonococcal infections, a single intramuscular dose of 250 mg is recommended

For preoperative use (surgical prophylaxis), a single dose of 1 gm administered ½ to 2 hours before surgery is recommended

When treating infections caused by *Streptococcus pyogenes*, therapy should be continued for at least ten days

No dosage adjustment is necessary for patients with impairment of renal or hepatic function, however, blood levels should be monitored in patients with severe renal impairment (*e g*, dialysis patients) and in patients with both renal and hepatic dysfunctions

HOW SUPPLIED: Rocephin (ceftriaxone sodium/Roche) is supplied as a sterile crystalline powder in glass vials and piggyback bottles The following packages are available

Vials containing 250 mg equivalent of ceftriaxone Boxes of 10 (NDC 0004 1962-01)
Vials containing 500 mg equivalent of ceftriaxone Boxes of 10 (NDC 0004 1963-01)
Vials containing 1 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1964-01)
Piggyback bottles containing 1 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1964 03)
Vials containing 2 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1965-01)
Piggyback bottles containing 2 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1965 03)
Bulk pharmacy containers, containing 10 gm equivalent of ceftriaxone Boxes of 1 (NDC 0004 1971 01)
NOT FOR DIRECT ADMINISTRATION

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

References:

1. Data on file, Hoffmann-La Roche Inc.
2. Patel IH, Kaplan SA: *Am J Med* 77:17-25, Oct 19, 1984
3. Richards DM, *et al: Drugs 27*:469-527, 1984
4. Cleeland R, Squires E: *Am J Med* 77:3-11, Oct 19, 1984.
5. Tanner DJ, Nazarian MQ: *Am J Med* 77:104-111, Oct 19, 1984.

Medicine in Literature

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Valuing a Medical Practice. American Medical Association Department of Practice Management, 1981.

Anderson JG, Jay SJ (eds): *Use and Impact of Computers in Clinical Medicine.* New York, Springer-Verlag, 1987.

Anderson JL (ed): *Acute Myocardial Infarction. New Management Strategies.* Rockville, Md, Aspen Publishers, Inc, 1987.

Aquavella JV, Rao GN (eds): *Contact Lenses.* Philadelphia, J.B. Lippincott Company, 1987.

Boswick JA Jr (ed): *The Art and Science of Burn Care.* Rockville, Md, Aspen Publishers, Inc, 1987.

Bradford DS, Lonstein JE, Moe JH, et al: *Moe's Textbook of Scoliosis and Other Spinal Deformities.* Philadelphia, W.B. Saunders Company, 1987.

Bruner WE, Stark WJ, Maumenee AE (eds): *Manual of Corneal Surgery.* New York, Churchill Livingstone, 1987.

Castleman BI: *Asbestos: Medical and Legal Aspects,* ed 2. Clifton, NJ, Law & Business, Inc, 1986.

Cooper PR (ed): *Head Injury,* ed 2. Baltimore, Williams & Wilkins, 1987.

Edelman DA: *DES/Diethylstilbestrol—New Perspectives.* Boston, MTP Press Limited, 1986.

Evans OB: *Manual of Child Neurology.* New York, Churchill Livinstone, 1987.

Fuller TA (ed): *Surgical Lasers. A Clinical Guide.* New York, Macmillan Publishing Company, 1987.

Gillette PC, Griffin JC (eds): *Practical Cardiac Pacing.* Baltimore, Williams & Wilkins, 1986.

Hatch JP, Fisher JG, Rugh JD (eds): *Biofeedback. Studies in Clinical Efficacy.* New York, Plenum Press, 1987.

Hersen M, Van Hasselt VB (eds): *Behavior Therapy with Children and Adolescents. A Clinical Approach.* New York, John Wiley & Sons, 1987.

Hurt R, Bates M: *Essentials of Thoracic Surgery.* Boston, Butterworths, 1986.

Jovanovic L, Peterson CM, Fuhrmann K (eds): *Diabetes and Pregnancy. Teratology, Toxicity and Treatment.* New York, Praeger Publishers, 1986.

Kaplan C, Turner GS, Warrell DA: *Rabies. The Facts,* ed 2. New York, Oxford University Press, 1986.

Kim EE, Haynie TP: *Nuclear Diagnostic Imaging. Practical Clinical Applications.* New York, Macmillan Publishing Co, Inc, 1987.

Lauri G, Maynard FM, Fischer DA, et al: *Handbook on the Late Effects of Poliomyelitis for Physicians and Survivors.* St Louis, Gazette International Networking Institute, 1984.

Marshall KG, Attia EL: *Disorders of the Nose and Paranasal Sinuses. Diagnosis and Management.* Littleton, Mass, PSG Publishing Company, Inc, 1987.

Nelson RM, Currier DP (eds): *Clinical Electrotherapy.* Norwalk, Conn, Appleton & Lange, 1987.

Pearce JA: *Electrosurgery.* New York, John Wiley & Sons, 1986.

Ramsey RG: *Neuroradiology,* ed 2. Philadelphia, W.B. Saunders Company, 1987.

Reeve P (ed): *Chlamydial Infections.* New York, Springer-Verlag, 1987.

Roberts WC: *Adult Congenital Heart Disease.* Philadelphia, F.A. Davis Company, 1987.

Seidel HM, Ball JW, Dains JE, et al: *Mosby's Guide to Physical Examination.* St Louis, The C.V. Mosby Company, 1987.

Shnider SM, Levinson G (eds): *Anesthesia for Obstetrics,* ed 2. Baltimore, Williams & Wilkins, 1987.

Tottenham TO, Hopkins JP, Taylor KA: *Texas Medical Jurisprudence,* ed 4. Houston, Fulbright & Jaworski, 1986.

Vladutiu AO: *Pleural Effusion.* Mount Kisco, NY, Futura Publishing Company, Inc, 1986.

Wallace DJ, Dubois EL: *Dubois' Lupus Erythematosus,* ed 3. Philadelphia, Lea & Febiger, 1987.

Walters WAW, Ross MW (eds): *Transsexualism and Sex Reassignment.* New York, Oxford University Press, 1986.

Webster MHS, Soutar DS: *Practical Guide to Free Tissue Transfer.* Boston, Butterworths, 1986.

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7558

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD

COLON & RECTAL SURGEON
OUT-PATIENT LASER HEMORRHOIDECTOMY

Bowel obstruction from cancer of the colon, volvulus, Crohn's or ulcerative colitis, toxic megacolon, diverticular obstruction, acute or chronic colon bleeding, colovesicle fistula, rectovaginal fistula, rectal fistulas, rectal prolapse, anal incontinence, warts, pruritus ani, rectal abscesses and other rectal conditions.

Emergency consultations and referrals; weekends and evenings.

Privileged at Baylor University Medical Center and Methodist Central Hospital.

214 821-4300, answered 24 hours and weekends
214 341-0859, residence

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism
Practice Limited to Endocrinology & Diabetes
5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service

. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery
DAVID J. ZEHR, MD—Microsurgery
ARNOLD V. DiBELLA, MD
Hand Surgery and
Upper Extremity Reconstructive Surgery
3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA

Diplomates American Board of Orthopaedic Surgery
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops

. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery

JACINTO ZAMBRANO, MD
Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# S12 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone 817 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3B00 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite B116, Dallas, Texas 7S230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7S1S S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 770B2; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0SS1

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
W. Robert Hudgins, MD
Richard H. Jackson, MD
Mark J. Cwikla, MD
Casey E. Patterson, MD (Retired)

59S9 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620, Dallas, Texas 7S23S; 214 637-0420

B210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905; Dallas, Texas 7S231; 214 369-7S96

1302 Lane St., Copper Tree Medical Center, Suite 300, Irving, Texas 75062; 214 2S9-4768

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American Board of Neurological Surgery

1S22 Cooper, Fort Worth, Texas 76104; B17 336-1300

TMA HealthWise Series
. . . Another service of your association

ARLINGTON ASSOCIATION OF
NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4S93

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 770S4
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0S40
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0S40

Diplomate American Board of Nuclear Medicine

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES
Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD
Diseases and Surgery of the Retina and Vitreous
7150 Greenville Ave., Dallas, Texas 7S231; 214 692-6941 or 800 B72-2020
3600 Gaston Avenue, Dallas, Texas 7S246; 214 821-4S40

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 7S204
214 S21-11S3; 1-800-442-S376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 7820S; S12 226-S191

TMA Action monthly newsletter
. . . Another service of your association

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-714S

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 S4S-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite S03, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-800-833-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS
Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD
John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas
77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas
77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

Heights Medical Eye Center, 535 West 20th Street, Houston, Texas 77008;
713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Shubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery

A Professional Association

2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 79S-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 7523S; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 22S-604S
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

TMA Physicians Benevolent Fund

. . . Another service of your association

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA
ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

SAN ANTONIO HEAD & NECK SURGICAL ASSOCIATES, PA

Board Certified Otolaryngologists

Julius F. Marlowe, MD
Michael H. Bertino, MD
G. Paul Laursen, DDS, MD, FACS, FAAFPRS
Harry Schilling, MD
Stephen J. Talley, MD

ENT, Facial Plastic Surgery, Lipo-Suction

Madison Square Medical Building, Suite 304, 311 Camden, San Antonio, Texas 78215; 512 224-5481

Physicians' Plaza, Suite 370, 8038 Wurzbach Road, San Antonio, Texas 78229; 512 690-1326

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES
Dorothy Patras, MD

Anatomic Pathology and Consultation in Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.
J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box S5008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

FORT WORTH PLASTIC SURGERY CLINIC
David A. Grant, MD, FACS

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD

Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

WILLIAM E. BARNES, MD

Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite S, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN

Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery

Jacinto Zambrano, MD

Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES
302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone B17 756-0111

ROGER D. HARMAN, MD

Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
B17 33S-4044

PLASTIC SURGERY SPECIALISTS

Excellence in Form & Function
Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 770B2; 713 55B-53S3
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

PSYCHIATRY

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 7S228
214 3B1-71B1

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-11S0 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 7S234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

Representing TMA's legislative views
. . . Another service of your association

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; B17 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
B17 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-S170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
410S Live Oak St.
Dallas, Texas 75204; 214 B23-41S1

TMA Physician Membership Directory
. . . Another service of your association

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS
Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
S15 South Adams, Fort Worth, Texas 76104; B17 332-7B7B

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue, Suite 404, Dallas, Texas 7S246; 214 B27-3B90
Hours By Appointment

REGIONAL CARDIOVASCULAR CENTER
Cardiac, Vascular and Thoracic Surgery
Mario O. Kapusta, MD
Phillip R. Adams, MD
925 E. Dawson, Tyler, Texas 75701
214 593-9022

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
B17 336-S711

EUGENE R. TODD, MD, PA
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology
Urology—Adult and Pediatric
3600 Gaston Avenue, Baylor Medical Center Plaza, Wadley Tower, Suite 75S, Dallas, Texas 7S246
214 B26-3S00

DALLAS UROLOGY ASSOCIATES
David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-776S Answered 24 Hours

KIRBY B. TARRY, MD, FACS
Diplomate, American Board of Urology
Adult and Pediatric Urology
Impotence with Prosthesis-Vasovasostomy
140S West Illinois, Midland, Texas 79701
915 6B7-4SS3

SOUTHWEST UROLOGY ASSOCIATES
Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology
221 W. Colorado, #440, Dallas, Texas 7520B; 214 94B-3101
3450 W. Wheatland Road, #60, Dallas, Texas 7S211

C. F. SKRIPKA, JR, MD, FACS
Urology, Andrology & Neurourology
1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

How to live with someone who's living with cancer.

Learning to live with cancer is no easy task. Learning to live with someone else's cancer can be even more difficult.

Nobody knows better than we do how much help and understanding is needed. That's why our service and rehabilitation programs emphasize the whole family, not just the cancer patient.

We run local programs with volunteers who are recovered cancer patients, or whose lives have been touched by family members or friends with cancer. That's what makes us one of the largest, best-motivated and most caring of any health organization in the country.

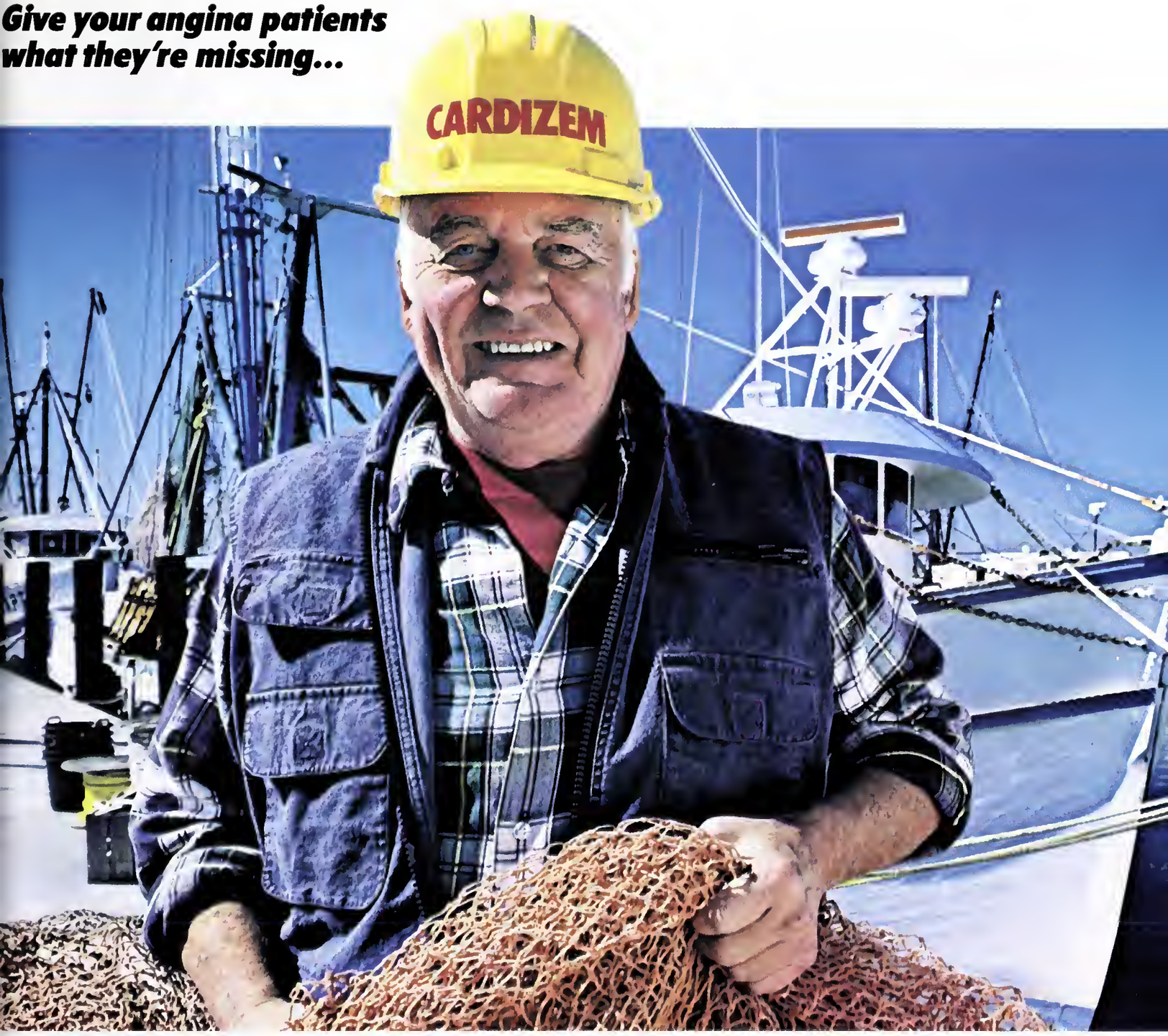
Among our regular services we provide information and guidance to patients and families, transport patients to and from treatment, supply home care items and assist patients in their return to everyday life.

Life is what concerns us. The life of cancer patients. The lives of their families. So you can see we are even more than the research organization we are so well known to be.

No one faces cancer alone.

AMERICAN CANCER SOCIETY®

Give your angina patients what they're missing...



CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3]****
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

90 mg GREATER DOSAGE FLEXIBILITY NEW 120 mg

****See Warnings and Precautions.***

Please see brief summary of prescribing information on the next page.

CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. ***Issued 7/86***

See complete Professional Use Information before prescribing.

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al. Clinical outcome after treatment of rest angina with calcium blockers. Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983, 106(6):1341-1347.* ***2.*** *Shapiro W. Calcium channel blockers. Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesaway R, Humen DP, et al. Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS. Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0246M6

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

West Texas—Big Spring State Hospital. Psychiatrist, child psychiatrist and general physician positions available, board certified or eligible. Texas license required. JCAH fully accredited facility. Excellent benefit package including 40-hour work week, malpractice protection, retirement, and tax-sheltered income program. Beautiful, friendly sunbelt location. City of 25,000 with good schools and excellent housing. Contact Superintendent, Big Spring State Hospital, P.O. Box 231, Big Spring, Texas 79721-0231; 915 267-8216. An EO/AAE.

STAFF PHYSICIANS

The Texas Department of Corrections is recruiting for full-time staff physicians for several locations in East Texas and in the Houston area. M.D. or D.O. degree, with current Texas license.

In addition, a vacancy exists in the Palestine area for a Physiatrist to work with mentally retarded offenders. Applicants must be board eligible or certified with a current Texas license. Experience working with mentally retarded is preferred. Requires the ability to design and implement therapeutic and recreational programs as well as caring for general medical needs.

All facilities are accredited by the National Commission on Correctional Health Care.

Send curriculum vitae or resume to: Personnel, Health Services Area, Tx Department of Corrections, P.O. Box 99, Huntsville, TX 77340; (409)294-2755. EQUAL OPPORTUNITY EMPLOYER

Dean, Texas A&M University College of Medicine—Applications and nominations are invited for the position of Dean of the College of Medicine. The fully accredited college admitted its charter class in 1977. In 19B5 it was approved to offer the MS and PhD degrees in medical sciences. Facilities include the College Station campus Medical Sciences Building adjoining the Medical Sciences Library and the clinical campus in Temple, Texas comprising the 400-bed Scott and White Memorial Hospital and Clinic and the 630-bed Olin E. Teague Veterans' Center. College Station and Temple facilities are linked by an interactive closed-circuit television system via a dedicated microwave link. Candidates should possess demonstrated qualities of vision and leadership, a record of scholarly achievement and a dedication to high standards of academic excellence. Candidates are expected to have an MD or an earned doctorate in an appropriate field. Nominations will remain open until June 15, 19B7 or until the position is filled. Please send nominations and applications to Clinton A. Phillips, PhD, Dean of Faculties and Chair of College of Medicine Search Committee, Texas A&M University, College Station, Texas 77B43. Texas A&M University is an affirmative action, equal opportunity employer.

General Physicians—Wichita Falls State Hospital, Wichita Falls, Texas. Population 100,000. Accredited. JCAH. Salary $59,856 to $62,B56. Texas medical license. Write Richard Bruner, Superintendent, P.O. Box 300, Wichita Falls, Texas 76307, or call collect 817 692-1220, ext. 213. An equal opportunity/affirmative action employer.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call B17 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 7724B; 713 B61-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-B00-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-B00-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit-sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas: Full time ED positions available in the greater Houston area with local group. Please send CV to STAT Physicians, P.O. Box 79348, Houston, Texas 77279-9348; or call 713 468-7810.

Free standing minor emergency clinic currently seeking experienced FP physicians to staff an all night clinic. Independent contract. Texas license required. Direct inquiry and CV to Ad-665, TEXAS MEDICINE, 1B01 North Lamar Blvd., Austin, Texas 78701.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 19B7. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, B05 North Main, Big Lake, Texas 76932; 915 BB4-2561.

Practice family medicine with the people in rural Iowa communities where the quality of life is superb. Solo and group practice opportunities available including guaranteed salaries and full benefit packages. For an immediate response please call 1-800-247-3121, ext. 8204 (USA).

Friendly rural community in south-central Texas looking for family practice doctor who enjoys quiet country living. Fully equipped and staffed clinic with well established practice. Rotating call at near-by hospital every 5th weekend and one night per week. Call Moulton Community Clinic 512 596-4675 between B am and 5 pm.

Small town medical center is currently seeking general or family physician to join our health team. Medical center has a 16-bed hospital, 3B-bed nursing home (95% occupancy), dental clinic, and a 3-physician clinic all located under one roof. Currently one family practice physician and one pediatrician on staff. Will guarantee income or provide all expenses, including employee payroll and insurance. Excellent school system, small town atmosphere (average age of population, young). Contact Jack H. Black, Administrator 5chleicher County Medical Center, P. O. Box V, Eldorado, Texas 76936; 915 853-2507.

Prosperous, expanding multispecialty group in choice rural area of Central Texas needs two family practitioners for satellite. Group is independent, fee-for-service. Salary, incentive and benefits exceptionally good. No initial investment required. Full stockholder status in two years if mutually desirable. For prompt response send CV to Pankey Hall, 5804 Karankawa Cove, Austin, Texas 78731.

Excellent opportunity to establish busy practice by replacing a retiring physician. Fully equipped general practice and minor surgery clinic established 14 years in Northeast Texas. Family practitioner, BC or BE. Contact P.O. Box 234, Cleveland, Texas 77328-0234.

Family Practice—If you are a well qualified family physician you can work with PRN, Ltd. in any number of community settings and practice styles. You will receive excellent income without sacrificing your freedom and independence. We provide locum tenens assignments, practice trial options, and permanent placement opportunities throughout the state. Call your colleagues at 1-B00-531-1122, or write Kenneth W. Teufel, MD, 1000 North Walnut, Suite A, New Braunfels, Texas 78130.

Dallas Vicinity—FP group seeks board certified, full time associate for satellite office (within 15 minutes of hospital). OB preferred. Modern, 150-bed hospital. Shared call. Very lucrative practice potential; generous incentive package. Excellent lifestyle. Please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

San Antonio Vicinity—Seeking board certified FP desiring full range of family medicine, including OB. Modern hospital, new professional office building adjacent to hospital. No evening or weekend ER call required. Share call with young, BC family physician. Hunting mecca. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

Expanding 21 physician multispecialty group has two openings: Pediatrician and OBG. High beginning guaranteed salaries in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Board Qualified OBG Needed—Take over 31-year established OBG practice with trained, qualified office staff and low overhead. Adjacent to area's largest major hospital where founder, as former Chief of Staff, practiced. Excellent physician and community support with adequate cross-coverage available. Reasonable office practice with growth potential for additional physician. Practice profile available to qualified physicians. Send inquiries in confidence to Golden Triangle Practice Search Committee, Attn: L. Marroquin, Jr., Trustee, 4054 Nenana, Houston, Texas 77025.

South Texas—Obstetrician/gynecologist, board eligible certified, to join an incorporated practice of three board certified OBGs. Subtropical Gulf Coast area with excellent water sports, hunting and fishing all year around. Gender no barrier. Excellent salary, full range of benefits, full partnership after two years. 5end resume to Ad-664, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Orthopedic Surgery

Orthopedic Surgeon—East Texas, considering association with board eligible or certified orthopedist. CVs invited. Please reply to Ad-662, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 7B701.

WANTED—Board certified orthopedic surgeons to evaluate medical records for insurance companies and attorneys. Write 1040 NW 6th Street, Boca Raton, Florida or phone 305 394-3311.

Pediatrics

Expanding 21 physician multispecialty group has two openings: Pediatrician and OBG. High beginning guaranteed salaries in addition to benefits

with no first year expenses. Send CV to Doyle Lamb, Malone and Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Other Opportunities

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129. Toll free in Texas 1-800-331-8472.

The Medical and Surgical Clinic of Sherman, Texas is currently expanding its multispecialty group to include specialists in pediatrics, ophthalmology and otolaryngology. Interested parties please contact Ron Marshall, Administrator, 214 893-5138 (collect).

Positions Available—Seeking BC/BE, general internist, HEM/ONC, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or BE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78539; 512 383-1481.

Otorhinolaryncologist needed to join 18 physician multispecialty group. High first year guarantee in addition to benefits with no first year expenses. Send CV to Tammy Stripling, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720.

Cardiologists, invasive/noninvasive BC/BE to join two BC cardiologists located in southwest Houston. Good salary, fringe benefits, partnership after two years. Send CV to P. McKenzie, 1919 Landmark, Richmond, Texas 77469.

Psychiatrist—110 bed hospital to assist/develop practice in bedroom community of Fort Worth with access to outdoor sports, good schools, metro amenities. Board eligible/board certified residents considered. High gross income guarantee and marketing support. Contact Mary, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 30338. Call collect 404 641-6411.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Fred Brinker, Medical Division, JSI, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-0475.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include OBG, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-8080; or send CV to Mitchell & Associates, Inc., P.O. Box 1804, Scottsdale, Arizona 85252.

Primary care physician to join group of three physicians in Burnet, Texas. Solo practice in clinic with shared expenses. Position immediately available. Prefer family practice, general practice or internal medicine. Hill country community of 3,500, good schools, superb recreational facilities—hunting, fishing and water sports. Low crime. JCAH approved hospital. For further information, contact Peggy Newman, MD, P.O. Box L, Burnet, Texas 78611; 512 756-2784.

Excellent Texas Opportunities—ENT, family practitioner, general practitioner, general surgeon, internal medicine, OBG person to practice in one of several lake area communities, in the beautiful Piney Woods of East Texas. Enjoy boating, fishing, hunting year around. Excellent quality of life, first year guarantee, etc. Reply with CV to Medical Support Services, Armando L. Frezza, 11509 Quarter Horse Trail, Austin, Texas 78750; 512 331-4164.

Excellent Texas Opportunities—General surgeon, internal medicine, OBG, pediatrician to practice in a community close to Houston. Enjoy country living at its best with the convenience of Houston within 40 minutes. New high tech 150-bed hospital with good coverage, excellent quality of life. First year guarantees, etc. Reply with CV to Medical Support Services, Armando L. Frezza, 11509 Quarter Horse Trail, Austin, Texas 78750; 512 331-4164.

Cardiologist, BE, BC—Excellent opportunity with outstanding potential. Modern progressive hospital in an ideal southern family community. Write AD-663, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

OBG and internist needed to expand capabilities of 10 member staff. Salary guarantee and other fringe benefits are available. Send CV with inquiries to Bud Neff, Administrator, Rolling Plains Memorial Hospital, Sweetwater, Texas 79556.

Physician Opportunities, Sunbelt—We have unadvertised solo, group and hospital based opportunities for general practice and most specialties. Financial guarantees, benefit packages negotiable. Fee paid. Professionals serving professionals. Send CV to FRH Associates, 5515 New Haven Court, Austin, Texas 78756, or call 512 459-6411.

OPPORTUNITIES SOUGHT

We have physicians who are looking to join solo, partnerships, or multispecialty groups in the Texas area. For more information call Medical Advisory Group, Inc., 214 758-9939.

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. 512 477-6704, ext. 263.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"
locum tenens & permanent placements

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

Family Practice Locum Tenens—Experienced, ABFP, professional liability insurance. Competitive rates. Nu Way Medical Service. 214 677-5302; #2 Crystal Drive, Athens, Texas 75751.

Family practice/Internist seeking purchase of/or association with thriving family practice or established ambulatory care center. Available June 1987. Please reply to Ad-659, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

General Internist-Family Practitioner interested in assuming or association with primary care practice or medical/industrial/minor emergency clinic. American graduate. Extensive experience. Urban location preferred. Available June 1987. Please reply to AD-667, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Experienced neurologist, BC, with four years experience performing and interpreting MRI and CT of head and spine as well as carotid ultrasound. Seeks affiliation with group needing expertise in these areas. Please reply to Ad-666, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Board certified family practitioner desires to relocate in Austin area after 20 year Air Force career. Extensive experience in administration and in the practice and implementation of family practice medicine. Contact William M. Evans, MD, Col. USAF MC, 1 Magnolia, Bergstrom Air Force Base, Austin, Texas 78719-2606; telephone 512 479-2903 or 512 389-0042.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than 50% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 18164, Dallas, Texas 75218; 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $1275; Cardionostic Holter recorder (cassette available) from $995. Smallest, slightest Holters update. Fast service (24-48 hrs.) turnover. Hookup kits starting at $4.95. Special introductory offer of three free tests with any purchase or lease of recorder. Cardiologist overread available for $15. If interested call 301 870-3626.

Doctor, you can't beat the quality or the price! Holter Monitor Scanning Service. Physician owned, trained, and supervised. Now using UP Service for faster turnaround time. No contracts to sign. We can arrange for lease/purchase of Holter equipment. Now is the time to own your own recorder for as little as $49 a month. Call DCG Interpretation 313 879-8860.

Office Space/Property

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

Austin—General internist desires to sublet half of 2,200 square foot office in Medical Arts Square. Convenient location one block from St. David's Hospital near university campus. Two exam rooms, one consultation room, chest x-ray facilities, large waiting area, free parking. Terms negotiable. 512 476-9145.

Beach House For Rent—On Corpus Christi Bay. Great view of Corpus Christi. Close to Padre Island, Port Aransas, and Corpus Christi. Sleeps 10 comfortably. 400 foot private, lighted fishing pier. Excellent fishing and swimming. $600 per week. Arrangements also available for motorboat and sailboat. Call Pat Nye at 512 993-9153.

Amarillo—Doctor's suite for lease. In-house laboratory and x-ray facility. Convenient to hospitals. Call 806 355-5666.

Radiology Office—North Dallas Suburb, 1655 sq. ft., furnished for general radiology and suitable for orthopedics, family practice, or pulmonary medicine. 214 235-0739.

Opportunity in Austin—beautiful homes—below market with great financing. Repossessed by lending institutions: Great Hills, Rob Roy, Jester Estates, Lost Creek, Barton Estates, Lakeway, Westover Hills and more. Office complexes available. Best prices on business, mortgage, or personal term life insurance. Call 512 836-9126, MediFinancial, Harper, Broker.

Practices

Family Practice For Sale—Northwest of Fort Worth. Well established, successful family practice located just northwest of Fort Worth is for sale. Includes equipment, building, and land. Available in July 1987 or sooner. Contact Lawrence F. Hilek, P.O. Box 171294, Arlington, Texas 76003; 817 467-1607.

Houston, established minor emergency, family practice and weight reduction clinic at strategic location. X-ray, lab. Low rent. No OB. Big growing potential. Grossed 256K in 1986. For sale 129K. No financing. Prime real estate optional. Serious inquiries only. Reply to Ad-660, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. First time offer, exceptional opportunity!

For Sale, General Practice—Near downtown Houston, two blocks from major freeway. Ten minutes from the Medical Center. Solo practice. Generated $200,000+ last year, operating half days. 1,774 sq. ft. of office space in doctors medical plaza; fully equipped. Four treatment rooms and lab and x-ray. Terms negotiable. Contact Mrs. Zal H. Sanders, 9606 Briar Forest Drive, Houston, Texas 77063.

Active Solo Practice/Internal Medicine—Retiring late in 1987. 1,700 sq. ft. modern building. Fully equipped, laboratory, x-ray, three examining rooms, tables, cabinets, etc. Sell or lease building. Sell equipment at small fraction of replacement cost. 2,000 active patients. Will introduce. Practice free. Roy Daugherty, MD, 4006 West 33rd, Amarillo, Texas 79109.

Gastroenterology practice for sale. North Dallas. Gross 300K plus. Fully equipped office condo in large medical complex. Fully occupied. Call 214 394-8182 or 690-6018. Write 13138 Chandler, Dallas, Texas 75243.

Thriving family practice in county seat of 5,000 near city of 250,000. Excellent net in a "non-participating," non-Medicaid practice. Practice in nearby JCAH modern hospital doing OB, surgery, or emergency room only if desired. Available immediately. Owner leaving for academic position July 1. Contact Henry Harren, MD, 209 E. Market Street, Sinton, Texas 78387, or call 512 364-1200 (office) or 512 364-3433 (home).

Austin Vicinity—Internal medicine practice for sale in attractive community. Shared call coverage. Established practice with proven capability to generate lucrative income in a desirable community offering an excellent lifestyle. Includes all equipment and furnishings. Reasonable price and terms. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 75080. Contact Dan Lewis at 214 437-1180 office or 214 238-7129 evenings.

For residents, start-up practitioners, and established physicians—unsecured signature loans $5,000-$60,000. No points or fees. Competitive rates, level payments. Up to six years to repay. Deferred principal option. No prepayment penalties. For information and application, call Austin 512 836-9126, MediFinancial, Harper, or 1-800-331-4952, MediVersal, Dept. 114.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

Advertising Rates & Data: Regular classified advertising sells for $39. (US currency) per issue for 50 words or less, payable in advance. Display classified advertising sells for $70. per column inch, per month. A variety of typefaces, logos and borders may be used in display classified ads. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings cannot be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Federal laws prohibit references to race, color, religion, sex, national origin, or age unless bona fide occupational qualifications. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Children believe what their parents tell them.

"You disgust me!"

"You're pathetic. You can't do anything right!"

"You can't be my kid."

"Hey stupid! Don't you know how to listen."

"I'm sick of looking at your face!"

"I wish you were never born!"

Ad Council

95

Words hit as hard as a fist.
Next time, stop and listen to what you're saying.
You might not believe your ears.

Take time out. Don't take it out on your kid.
Write: National Committee for Prevention of Child Abuse, Box 2866E, Chicago, IL 60690

A Positive Point About Breast Cancer.

Now we can see it before you can feel it. When it's no bigger than the dot on this page.

And when it's 90% curable. With the best chance of saving the breast.

The trick is catching it early. And that's exactly what a mammogram can do.

A mammogram is a simple x-ray that's simply the best news yet for detecting breast cancer. And saving lives.

If you're over 35, ask your doctor about mammography.

Give yourself the chance of a lifetime.™

AMERICAN CANCER SOCIETY®

Advertising Directory

Air Force	70
American Physicians Insurance Exchange	4
American Physicians Life Insurance	7
BMW Center	67
Burroughs Wellcome	17, 18, 19
Campbell Laboratories, Inc.	77
Ciba Pharmaceutical Company	11, 12
Diagnostic Clinic of Houston	24
Family Practice Recertification	20
Glaxo Roche	71–74
Houston Marriott Medical Center	65
I. C. System, Inc.	26
Kanaly Trust Company	12
Phyllis Kessel's Medical Marketing Newsletter	53
Knoll Pharmaceutical	35, 36
Eli Lilly & Company	34
Marion Laboratories, Inc.	91, 92
The Medical Protective Company	48
Norwich-Eaton Pharmaceuticals, Inc.	21, 22
Psychiatric Institutes of America	5
Roche Laboratories	1, 2, 25, 81, 82
Scott and White Clinic	Back Cover
Michael R. Sharp, Attorney	2nd Cover
Smith Kline & French	37
Spring Shadows Glen	2nd Cover
Starlite Village Hospital	12
Texas Army National Guard	22
Texas Medical Association	
Hospital Medical Staff Leadership Conference	22
Memorial Library	80
Texas Medical Association Insurance Program	8
Texas Medical Liability Trust	16
Timberlawn Psychiatric Hospital	Back Cover
United States Army	3rd Cover
The University of Texas Health Center at Tyler	53
The Upjohn Company	38
Vestra-Subco, Inc.	20
Warm Springs Rehabilitation Hospital	23

Texas Physicians' Directory	84–90
Classified Advertising	93–95

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

COURSES

JULY

Cardiovascular Disease

July 3-5, 1987
AMERICAN COLLEGE OF CARDIOLOGY 4TH ANNUAL STRESS AND THE HEART CONFERENCE. Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo. Fee $290 members, $355 nonmembers. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Registration Secretary, Extramural Programs Department, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

July 16-18, 1987
ADVANCES IN CARDIOLOGY/3RD ANNUAL BERKSHIRE MEDICAL CONFERENCE. Country Inn and Conference Center, Jiminy Peak, Hancock, Mass. Fee $295. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Berkshire Area Health Education Center, 725 North St, Pittsfield, MA 01201 (413) 499-4161, ext 2417

General Medicine

July 23-25, 1987
COMMON EMERGENCIES IN GENERAL MEDICINE/3RD ANNUAL BERKSHIRE MEDICAL CONFERENCE. Country Inn and Conference Center, Jiminy Peak, Hancock, Mass. Fee $295. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Berkshire Area Health Education Center, 725 North St, Pittsfield, MA 01201 (413) 499-4161, ext 2417

Geriatrics

July 7-8, 1987
DIFFERENTIAL DIAGNOSIS OF DEMENTING DISEASES/NIH CONSENSUS DEVELOPMENT CONFERENCE. Masur Auditorium, National Institutes of Health, Bethesda, Md. No fee. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Marti Bernstein, Prospect Associates, 1801 Rockville Pike, Suite 500, Rockville, MD 20852 (301) 468-6555

Internal Medicine

July 12-17, 1987
23RD ANNUAL INTERNAL MEDICINE PROGRAM. YMCA of the Rockies, Estes Park, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

Neurology

July 13-15, 1987
NEUROFIBROMATOSIS/NIH CONSENSUS DEVELOPMENT CONFERENCE. Masur Auditorium, National Institutes of Health, Bethesda, Md. No fee. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Barbara McChesney, Prospect Associates, 1801 Rockville Pike, Suite 500, Rockville, MD 20852 (301) 468-6555

Plastic Surgery

July 12-15, 1987
PSEF/ASAPS RECONSTRUCTIVE AND AESTHETIC OCULOPLASTIC SURGERY. Williamsburg Lodge, Williamsburg, Va. Fee $500 members, $600 guest physicians, $350 residents. Category 1, AMA Physician's Recognition Award; 12 hours. Contact the Plastic Surgery Educational Foundation, Exchange National Bank, PO Box 74140, Chicago, IL 60690 (312) 856-1818.

Sports Medicine

July 31-Aug 2, 1987
PEDIATRIC SPORTS MEDICINE: NORTH AMERICAN SOCIETY OF PEDIATRIC EXERCISE MEDICINE. Given Institute of Pathology, Aspen, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

AUGUST

Basic Sciences

Aug 12-15, 1987
ASPEN BASIC SCIENCE: RECEPTORS AND DISEASE. Given Institute of Pathobiology, Aspen, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

Cardiology

Aug 25-27, 1987
AMERICAN COLLEGE OF CARDIOLOGY/13TH ANNUAL TUTORIALS IN THE TETONS. Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo. Fee $290 members, $355 nonmembers. Category 1, AMA Physician's Recognition Award; 14 hours. Contact the Registration Secretary, Extramural Programs Department, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

General Medicine

August 23, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. Dallas. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Internal Medicine

Aug 3-7, 1987
7TH ANNUAL INTERNAL MEDICINE REVIEW. South Padre Island Hilton Hotel, South Padre Island, Tex. Fee $350. Category 1, AMA Physician's Recognition Award; 25 hours. Contact Office of Continuing Medical Education, Scott and White Clinic, Temple, TX 76508 (817) 774-4073

Aug 17-21, 1987
RENAL DISEASE FOR THE INTERNIST AND NEPHROLOGIST. Given Institute of Pathobiology, Aspen, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of

Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

Pediatrics

Aug 3-6, 1987
13TH ANNUAL PEDIATRIC PROGRAM. Given Institute of Pathobiology, Aspen Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

Perinatology

Aug 7-10, 1987
PERINATAL MEDICINE CONFERENCE. Snowmass Conference Center, Snowmass Village, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

SEPTEMBER

Anesthesiology

Sept 19-20, 1987
4TH ANNUAL PAIN SYMPOSIUM. Texas Tech University Health Sciences Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University HSC, Lubbock, TX 79430 (806) 743-2929

Endocrinology

Sept 30, 1987
CURRENT THERAPY IN DIABETES. Marriott Hotel-Medical Center, Houston. Fee TBA. Credit TBA. Contact Carol Soroka or Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

Sept 26, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. Houston. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Organ Transplantation

Sept 8-11, 1987
INTERNATIONAL ORGAN TRANSPLANT FORUM. David L. Lawrence Convention Center, Pittsburgh, Pa. Fee $250. Category 1, AMA Physician's Recognition Award; 26 hours. Contact International Organ Transplant Forum, Office of the Secretariat, DeSoto at O'Hara Streets, Pittsburgh, PA 15213 (412) 647-3490

Radiology

Sept 14-18, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Baylor Center for Imaging Research, The Woodlands, Tex. Fee $1,000 physicians, $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

OCTOBER

Basic Sciences

Oct 23-24, 1987
6TH SOUTHERN BIOMEDICAL ENGINEERING CONFERENCE. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Cardiovascular Disease

Oct 7-10, 1987
CARDIOLOGY AND CARDIOVASCULAR SURGERY: INTERVENTIONS, 1987. Houston. Contact Debby Butler, PO Box 20269, Mail Code 3-276, Houston, TX 77225 (713) 791-2157

Critical Care Medicine

Oct 7-9, 1987
EMERGING TRENDS IN CRITICAL CARE 1987. Orlando, Fla. Contact Rick Mace, Executive Director, Florida Heart Institute, 500 E Rollins, Suite 101, Orlando, FL 32803 (305) 897-1575

Emergency Care

Oct 22-24, 1987
EMERGENCY MEDICINE UPDATE. Dallas. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Family Medicine

Oct 17-18, 1987
CHRONIC PAIN MANAGEMENT IN PRIMARY CARE. Houston. Contact Sam Nixon, MD, Division of Continuing Education, The University of Texas Health Science Center, 1100 Holcombe Blvd, Houston, TX 77225 (713) 792-4671

Obstetrics and Gynecology

Oct 9-10, 1987
9TH ANNUAL SEMINAR IN OBSTETRICS AND GYNECOLOGY. Lubbock, Tex. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University HSC, Lubbock, TX 79430 (806) 743-2929

Ophthalmology

Oct 9, 1987
CURRENT CONCEPTS IN GLAUCOMA MANAGEMENT. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Orthopedic Surgery

Oct 29-31, 1987
DALLAS SHORT COURSE: ORTHOTICS AND PROSTHETICS. Dallas. Contact Ann Carlton, Department of Orthopedic Surgery, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3525 or (214) 688-2166

Pediatrics

Oct 2-3, 1987
11TH ANNUAL PEDIATRICS POSTGRADUATE CONFERENCE. Lubbock, Tex. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 743-2929

Oct 16-17, 1987
PRIMARY CARE PEDIATRICS FOOTBALL WEEKEND. Waco, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Radiology

Oct 30-Nov 1, 1987
DIAGNOSTIC RADIOLOGY UPDATE. Dallas. Contact Dolly Christensen, Department of Radiology, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2502 or 688-2166

Surgery

Oct 30-31, 1987
GENERAL SURGERY UPDATE, 1987. Houston. Contact Carol Soroka,

Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

NOVEMBER

Critical Care Medicine

Nov 12-14, 1987
7TH ANNUAL WILLIAM BEAUMONT ARMY MEDICAL CENTER TRAUMA SYMPOSIUM: CONTROVERSIES IN HEAD AND NECK TRAUMA. El Paso, Tex. Contact LTC Troy Reyna, Chief, Trauma Service, William Beaumont Army Medical Center, El Paso, TX 79920-5001 (915) 569-2621 or (915) 569-2787

Gastroenterology

Nov 14, 1987
GASTROINTESTINAL ENDOSCOPY: PERSPECTIVES AND REFLECTIONS. Houston. Contact Lila Lerner or Vicki Forgac, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

Nov 8, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. San Antonio. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Internal Medicine

Nov 20-21, 1987
UPDATE IN SEXUALLY TRANSMITTED DISEASES. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Obstetrics and Gynecology

Nov 3-7, 1987
CONTEMPORARY ISSUES AND PRACTICES IN OB/GYN. Dallas. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Nov 4-6, 1987
UPDATE IN PELVIC AND VAGINAL SURGERY. San Antonio, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Nov 13-14, 1987
OFFICE GYNECOLOGY AND FOOTBALL WEEKEND. College Station, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Pediatrics

Nov 13-14, 1987
PEDIATRICS FOR THE PRACTITIONER: 21ST ANNUAL KENNETH C. HALTALIN PEDIATRICS SEMINAR. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Orthopedic Surgery

Nov 13-14, 1987
THE DISTAL RADIOULNAR JOINT: PROBLEMS AND PROCEDURES. Orlando, Fla. Contact the American Society for Surgery of the Hand, 3025 South Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Surgery

Nov 4-7, 1987
2ND INTERNATIONAL CONGRESS ON CYCLOSPORINE. Washington, DC. Contact Alice Reardon, Continuing Education Division, G.104 MSB, The University of Texas Medical School, 6431 Fannin, Houston, TX 77030 (713) 792-5346

DECEMBER

Computer Applications

Dec 7-8 and 10-11, 1987
COMPUTER APPLICATIONS: AN INTRODUCTORY WORKSHOP. Houston. Contact Robin Murray, The American College of Obstetricians and Gynecologists, 600 Maryland Ave, SW, Washington, DC, 20024-2588 (202) 638-5577, ext 343

Radiology

Dec 7-11, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. The Woodlands, Tex. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

Dec 3-4, 1987
SURGICAL HEALTH POLICY AND FINANCE. New York. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category I, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

EF TELEPLAST TELECONFERENCES

Oct 17, 1987, Saturday, 10 am to 12 pm
COSMETIC EYELID SURGERY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

Dec 5, 1987, Saturday, 10 am to 12 pm
SECONDARY RHINOPLASTY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 non-members. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

JUNE

BETTER COLLECTIONS, BILLING AND INSURANCE METHODS—2 hours
June 2, 1987, Stouffer Dallas Hotel, Dallas
June 3, 1987, Austin Marriott Airport, Austin
June 4, 1987, Houston Marriott Medical Center, Houston
June 23, 1987, Bexar County Medical Society Headquarters, San Antonio
June 24, 1987, The Tremont House, Galveston
June 25, 1987, The Worthington Hotel, Fort Worth

AUGUST

MEDICAL OFFICE MANAGEMENT INSTITUTE
Aug 3-7, 1987, San Antonio Marriott Riverwalk, San Antonio
Aug 24-28, 1987, Sheraton Park Central Hotel and Towers, Dallas

CALENDAR OF MEETINGS ■Denotes Texas Meetings

JUNE

AMERICAN CANCER SOCIETY 2ND NATIONAL CONFERENCE ON CANCER PREVENTION AND DETECTION, Seattle, June 25-27, 1987. American Cancer Society, 90 Park Avenue, New York, NY 10016

AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING, Chicago, June 21-25, 1987. Felix Niespodziewanski, 535 N Dearborn St, Chicago, IL 60610 (312) 645-4597

AMERICAN MEDICAL STAFF SECTION 9TH ASSEMBLY, Chicago, June 18-22, 1987. AMA, Dept of Hospital Medical Staff Services, 535 N Dearborn St, Chicago, IL 60610 (312) 645-4747

JULY

■TEXAS SOCIETY FOR RESPIRATORY THERAPY ANNUAL MEETING, Houston, July 14-19, 1987. Mike Marks, 506 W 12th St, Austin, TX 78701 (512) 479-0425

AUGUST

■TEXAS PERINATAL ASSOCIATION, INC, ANNUAL MEETING, El Paso, Aug 7-9, 1987. Dianne Brown, TPA, PO Box 2446, Lubbock, TX 79408-2446 (806) 743-3678

GIVE YOUR MEDICAL CAREER A SHOT IN THE ARMY

We are looking for dedicated physicians, physicians who want to be, not salesmen, accountants, and lawyers, but physicians. For such physicians, we offer a practice that is practically perfect, where in almost no time you experience a spectrum of cases some physicians do not encounter in a lifetime, where you work without worrying whether the patient can pay or you will be paid, and where you prescribe, not the least care, nor the most defensive care, but the best care. Army Medicine offers fully accredited residencies in virtually every specialty. Army residents generally receive higher compensation and greater responsibility than do their civilian counterparts and score higher on specialty examinations. Army Medicine offers an attractive alternative to civilian practice. As an Army Officer you receive substantial compensation, extensive annual paid vacation, a remarkable retirement plan, and the freedom to practice without endless insurance forms, malpractice premiums, and cash flow worries. If that is what you want, join the physicians who have joined the Army. Army Medicine is the perfect setting for the dedicated physician. Army Medicine provides wide-ranging opportunities for the student, the resident, and the practicing physician alike. Add all this up and you've got the best boost a career could have — the Army! Find out more about us today!

YES! I would like to know more about how the Army could give my career a boost. I understand that I am under no obligation whatsoever. Call (312) 926-2040 or

Mail completed form to:

AMEDD Personnel Counselor
Brooke Army Medical Center
ATTN: HSHE-OP
Fort Sam Houston, TX 78234-6200
(214) 767-0818

PLEASE PRINT

Dr. _____

Birth Date _____

Address _____

City _____ State _____ Zip _____

Phone (_____) _____

Medical School _____

Date Graduated _____

Medical Specialty _____

Date Passed ECFMG _____

SCOTT&WHITE

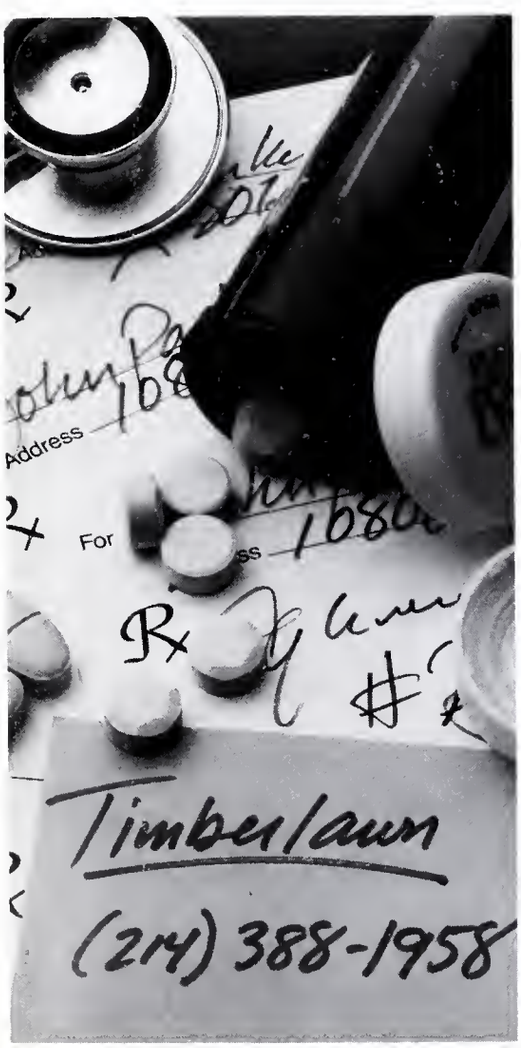
Texas A&M University
College of Medicine

Seventh Annual

INTERNAL MEDICINE REVIEW

For The Primary Care Physician
South Padre Hilton Resort
SOUTH PADRE ISLAND, TEXAS
August 2-7, 1987

For more information or to register contact: Office of Continuing Medical Education, (817) 774-2350, Scott and White, Temple, Texas 76508.



If the problem's close to home, now help is, too.

In today's medical community, the problem of substance abuse can strike very close to home. Indeed, physicians themselves are sometimes impaired by drug or alcohol abuse.

But professional treatment for health professionals is available. And now it's offered here in the south central U.S. by one of the nation's most respected private psychiatric hospitals, Timberlawn of Dallas.

The Timberlawn in-patient program for impaired health care professionals features:

Individual evaluation
Multi-disciplinary treatment
Family counseling
Peer support groups
Aftercare and monitoring services
Voluntary community service component

For more information contact: Edgar P. Nace, M.D., Chief of Substance Abuse Services

Timberlawn
Psychiatric Hospital

P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958

2 7277

515788

3 1378 00515 7881

UC San Francisco LIBRARY

UNIVERSITY OF CALIFORNIA · UNIVERSITY OF CALIFORNIA · UNIVERSITY OF CALIFORNIA

JULY 1987

TexasMedicine

61 TMA Advocacy Committee: Positive force in peer review
63, 66 Tort reform tours, legislative actions
55 Cancer Update: Malignant CNS tumors in children
69 Medicine and the Law: Consent for medical treatment

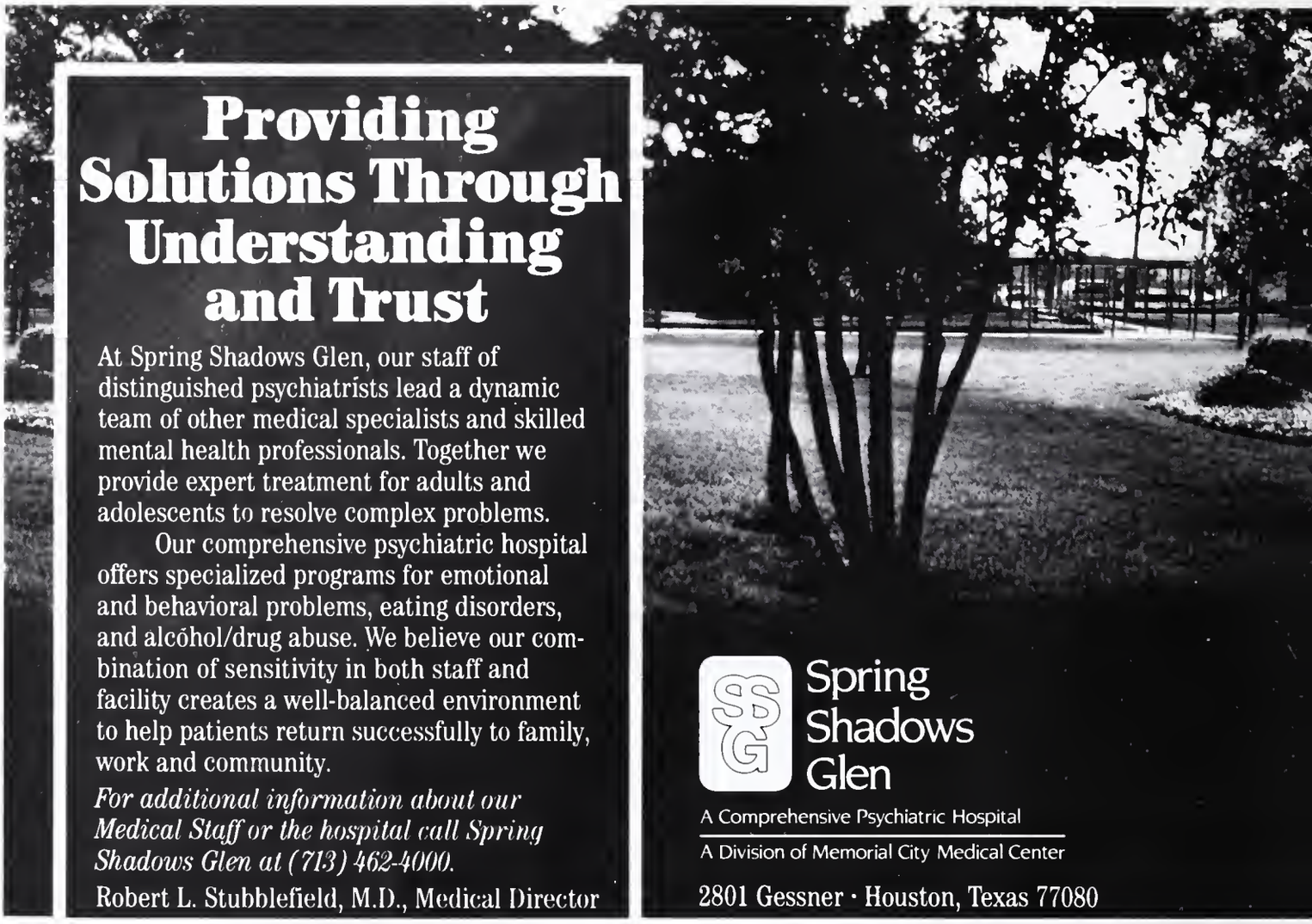
34 New ways to eliminate upper tract urinary stones

RRENT
EA

Texas medicine
UCSF LIBRARY
Received on: 07-17-87

UCSF LIBRARY
SERIALS DEPARTMENT
257 MEDICAL SCIENCES BUILDING
SAN FRANCISCO CA 94143

****



Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

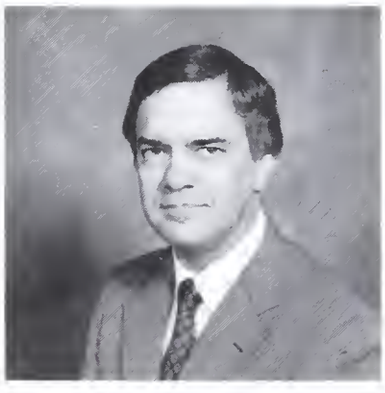
Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080



MICHAEL R. SHARP
ATTORNEY

REPRESENTATION IN MATTERS OF PROFESSIONAL LICENSURE BEFORE THE TEXAS STATE BOARD OF MEDICAL EXAMINERS

SHARP, TACKETT & DAVIDSON,
A PROFESSIONAL CORPORATION
1680 One American Center • Austin, Texas 78701 • (512) 473-2265

Not certified by the Texas Board of Legal Specialization.
Certification is not currently available to anyone in this legal area.

See the difference in the first week[1]

- **Sleep improvement in 74% of patients after first h.s. dose[2]**
- **Significantly faster relief–62% of total four-week improvement evident in first week versus 44% with amitriptyline alone[1]**
- **Dramatic first-week reduction in somatic complaints[2]**

% Reduction in Somatic Symptoms[2]

- **Only ⅓ the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar[1]**

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Protect your decision.
Write "Do not substitute."

In moderate depression and anxiety

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Copyright ©1987 by Roche Products Inc. All rights reserved.

References: 1. Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ

Limbitrol® Ⓘⓥ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500, Tel-E-Dose® packages of 100, Prescription Paks of 50.

ROCHE®
ROCHE PRODUCTS INC
Manati, Puerto Rico 00701

PI 058S

The rewards of Limbitrol
You're both smiling again!

See the difference in the first week[1]

In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.[1]

In moderate depression and anxiety

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

ROCHE®

Please see summary of product information on adjacent pag

TexasMedicine

VOLUME 83 JULY 1987

Contents

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

J. Forrest Fitch, MD, McAllen
Secretary

James M. Graham, MD, Austin
Harold R. High, MD, Cuero
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

David Vanderpool, MD, Dallas
President

E. Rubin Bernhard, MD, San Antonio
Vice President

Val F. Borum, MD, Fort Worth
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Margie B. Peschel, MD, Fort Worth
Secretary

Robert G. Mickey, Austin
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd. Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Shari Henson, Production Manager/
Editorial Assistant
Patty Illich, Administrative Secretary/
Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates, plus 7.25% state sales tax for Texas subscribers only, are: Members, $16 per year plus $1.16 sales tax; nonmembers and institutions, $20 per year plus $1.45 sales tax; foreign, $24 US currency; single copy, $2 plus $.15 sales tax

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701.

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701.

ARTICLES

34 New techniques for the elimination of upper tract urinary stones
Randall B. Meacham, MD; James M. Libby, MD; Donald P. Griffith, MD

47 Unusual presentation of fibrous dysplasia
Karen H. Calhoun, MD; Charles M. Stiernberg, MD; William D. Clark, DDS, MD; Byron J. Bailey, MD

52 The groundless malpractice suit: one remedy, summary judgment
Barlow Smith, LLB, MD

55 Cancer update: Malignant central nervous system tumors in children: the dawn of a new era
Paul M. Zeltzer, MD; Edward Arenson, MD

EDITORIALS

5 The Texas transfer law: an early assessment
Eugene V. Boisaubin, MD

FEATURES

61 TMA Advocacy Committee: A positive force for change

63 Wrap-up, part 1: The 70th Texas Legislature

66 Airborne odyssey: Touring Texas for tort reform

MEDICINE AND THE LAW

69 Consent for medical treatment
Helene A. Alt, JD

PRACTICE MANAGEMENT

72 Competition: how to meet it
George S. Conomikes

NEWS

TMA in action
9 House resolves to improve relationship with TMF
10 Dr Vanderpool to serve as TMA's 1987–1988 president
10 Dr Ainsworth receives Distinguished Service Award
11 Members can enjoy discounts on rental cars, hotels

Health line
11 TDH rules on disposal of radioactive material
11 CDC issues precautions for AIDS infection control

Socioeconomics
13 AMA announces revisions in PRO sanction process
16 Physicians must work hard to overcome challenges
23 Schenken calls for changes in Medicare financing
23 Public survey reaffirms TMA, access to care is down

Capital comments
23 Resolutions gain momentum, 309 representatives lend support
24 Catastrophic coverage gets nod, but not mandated assignment

24 Newsmakers

DEPARTMENTS

6 Letters
54 Information for authors
60 Clinical abstracts
73 Deaths
75 Medicine in literature
87 Continuing education directory

ON THE COVER

In the cover article, authors Randall B. Meacham, MD, James M. Libby, MD, and Donald P. Griffith, MD, discuss new techniques for the elimination of upper tract urinary stones. They stress the importance of patient selection and patient education in the use of these new techniques. The article begins on page 34. Cover design by Ed Triggs.

COMING NEXT MONTH

Articles scheduled for the August issue of *Texas Medicine* deal with management of refractory supraventricular tachycardia with an automatic antitachycardia pacemaker, thyroid function testing, anterior ischemic optic neuropathy after coronary bypass surgery, and emotional distress in cancer patients. Also scheduled, from the Cancer Update series, is an article on the clinical implications of allied health and nursing professionals' knowledge and attitudes regarding cancer prevention.

Pro-Tection

Pro-Tect

A FULL SPECTRUM ANTI-OXIDANT NUTRITION FORMULA

Antioxidants play a crucial role in protecting body cells from free radical damage caused by natural body processes, certain lifestyle choices and environmental and chemical pollutants.

Free radicals cause biological damage, generally by oxidative processes. This is the case in autoxidation, lipid peroxidation, radiation damage, chemical carcinogens and other pathological processes.

Excessive free radicals can attack vital cell structures and cause damage. Scientists theorize that constant cell damage from free radicals may contribute to the development of certain conditions.

Cells and tissues are protected against free radicals by a complexity of antioxidant mechanisms. Living organisms must maintain a constant antioxidant potential.

Antioxidant vitamins such as E, C and beta-carotene along with nature's other protectors help protect cells and tissue from free radical damage. Eating a variety of foods such as oranges, carrots, dark green vegetables, nuts, seeds and vegetables oils provide a rich source of natural antioxidants. If one's diet is coming up short consider antioxidants. They represent an easy, safe and inexpensive way to ensure nutritional protection.

PRO-TECT - the full spectrum anti-oxidant formula with protector vitamins

Each Pro-Tect capsule contains:

Emulsified Beta-carotene
Emulsified Vitamin E
Vitamin C
Selenium
Germanium
Emulsified CoEnzyme Q_{10}
Sorbic Acid
Glutathione (reduced)
dl-Methionine
L-Cysteine
L-Taurine
Zinc
Superoxide Dismutase and Catalase

For more information or the name and phone number of your local Biotics Research Corporation representative please contact:

BIOTICS RESEARCH CORPORATION

P.O. Box 36888 Houston, Texas 77236
US TOLL FREE 1-800-231-5777 TX TOLL FREE 1-800-833-5699

The Texas transfer law: an early assessment

Texas physicians and hospitals are mandated by law to follow uniform procedures for transferring patients from one hospital to another. Requirements include initial patient stabilization, approval of the transfer to an accepting hospital, and informed consent by the patient. This law was prompted by well-documented examples of unauthorized patient transfers, or "dumping," usually precipitated for financial reasons, with large public hospitals being common recipients.

The problem is not unique to Texas. Hospital transfers have been increasing at a dramatic rate across the nation, and a Cook County Hospital study in Chicago revealed that of 467 transfers to their institutions, 87% were for financial reasons. Medically, 24% of these patients were unstable at the time of transfer, and the death rate for transferred patients on the medical service was higher than that for other patients (1).

Additional attention to the problem has come from the AMA, which, during its annual meeting in 1986, reiterated its opposition to dumping indigent patients and called for further study and standards for transfer (2).

The new Texas law, supported by the Texas Medical Association, was enacted on April 1, 1986, with considerable optimism. Ron Anderson, MD, then chairman of the Texas Board of Health, called it "a model for the rest of the country" (3), and Arnold Relman, MD, editor of the *New England Journal of Medicine*, said, "The Texas initiative deserves not only applause but wide emulation" (4).

One year after enactment, some initial assessment of the impact of the law can be made. Although the law appears to be generally followed, some disturbing practices have evolved to avoid the transfer requirements. Perhaps the most grievous is the actual "dismissal" of the seriously ill patient from a private hospital or emergency room with the recommendation that he or she go immediately to the local public hospital. Patients who hesitate may be harrassed until they sign out "against medical advice" (AMA), thereby superficially exonerating the hospital and physician. This practice may represent abandonment, and the potential for additional patient harm is considerable. A more subtle practice utilizes the law's requirement that patients be apprised of their financial options for care. A bleak picture of monumental costs, aggressive billing, and even lien placement, together with an overly optimistic promise of "free care" at a public facility, can intimidate many patients into requesting transfer. A receiving institution, however, may also create problems in timely transfer by requiring certain details in the rules to be totally completed before the transfer is approved. These administrative delays may be catastrophic for the seriously ill patient who requires a higher level of care than the transferring hospital can provide. All of these practices are particularly serious because they reflect an intentional disregard for the intent of the law, which is to provide appropriate emergent medical care for the seriously ill patient, regardless of financial status.

Ironically, although the patient is usually viewed as an innocent pawn in the transfer game, the new law does allow loopholes for abuse by care recipients. For example, an indigent pregnant woman in Texas can forego prenatal care, present in active labor to any private hospital, and demand and receive delivery services. Although examples of this practice are limited, the potential for abuse is real, particularly in economically depressed areas with increasing numbers of patients who have no medical insurance.

More common but less serious problems arise from interpreting the semantics of the provisions. Most patients presenting to emergency centers in Texas do not have true emergencies but rather have urgent, or even routine, ambulatory problems. At what point does an emergent medical or surgical condition become only urgent or even routine? And at what point, therefore, may the patient no longer be formally transferred, but merely dismissed and "referred" to another facility for follow-up care? In addition, many administrative questions have evolved from the myriad of minor differences in policies followed by hundreds of Texas hospitals. A major referral hospital, for example, may receive over 100 valid, appropriate transfers per month from a large pool of small community hospitals. These routine transfers now create a monumental paper flow and constant administrative negotiations.

Finally, a major ethical question is raised as to whether the new law is financially just. Private hospitals and practitioners already provide a substantial amount of indigent care. Will this law only mandate additional care, but without financial recompense? Conversely, if the private hospitals do succeed in transferring more indigent patients to the already overburdened public facilities, how will these essential facilities survive without additional revenue?

In summary, the new transfer law is a serious response to a serious problem. Like many administrative laws, however, its ultimate effectiveness will need to be carefully monitored. If the law truly eliminates the episodes of serious abuse of inappropriate transfers and even abandonment, it may be worth the time and effort expended to document and formalize the majority of transfers, which are routine. But whether or not the more serious abuses will be stopped or simply redirected remains to be seen. Parkland Hospital in Dallas recently published data on its own transfer policy, adopted in 1983, which has had a significant effect on reducing transfers to their institution without prior notification (5).

We hope that some solutions will be possible for these problems. First, all major public hospitals need to make continued, careful documentation of the volume and nature of patient transfers, particularly with the new law in effect. The Parkland transfer policy and subsequent data provide a good start. Second, the bulk of the administrative problems should be solvable with time, effort, and coordination by interrelating hospitals. Third, particularly grievous examples of patient and hospital abuse need to be carefully documented and relayed to the Board of Health. Revisions in the law may be necessary so that it truly affects and corrects those problems for which it was created.

Last and most important, the real evil underlying un-

authorized patient transfers, and not addressed by the law, needs to be confronted immediately—just and adequate payment for indigent health care. Only when local, state, and federal governments face this issue in a coordinated and courageous manner can there be any real hope of abating this pernicious polarity in health care.

EUGENE V. BOISAUBIN, MD
The Methodist Hospital and Baylor College of Medicine, 6565 Fannin, Houston, TX 77030.

REFERENCES

1. Schiff RL, Ansell DA, Schlosser JE, et al: Transfers to a public hospital. A prospective study of 467 patients. N Engl J Med 314(9):552–557, 1986.
2. The problem of the economically motivated transfer, editorial. American Medical News 29:4, 1986.
3. TDH rules on hospital transfers take effect April 1. Tex Med 82(3):59–62, 1986.
4. Relman AS: Texas eliminates dumping. A start toward equity in hospital care, editorial. N Engl J Med 314(9):578–579, 1986.
5. Reed WG, Cawley KA, Anderson RJ: The effect of a public hospital's transfer policy on patient care. N Engl J Med 315(22):1428–1432, 1986.

Immigrants need not be indigent

Health care in America is not denied to anybody on the grounds of financial insolvency. As a matter of fact, some of the finest medical centers in the world are American hospitals devoted to the care of the poor. The indigent population to which they cater can be divided into two categories: those who have no funds of their own because they are unable to work or find work, and those who do work but choose to use their funds for purposes other than buying health insurance.

It is my impression that most Hispanic immigrants to Texas do not leave their homeland to get a "free lunch." They come to America to find work, and work they do. They are, however, unfamiliar with the concept of health insurance. Having the status of an illegal immigrant erects another barrier to their taking care of probable future health care needs.

It is difficult for me to comprehend why tax-paying citizens with their tax dollars pay for the health care of those in the work force who do not contract for health insurance. I congratulate Drs N. F. Gant and L. Mondy for succinctly pointing out that something drastic has to be done to preserve the public health care system for those who are really in need. (Immigrant health care: Are we responsible, or not? *Texas Medicine*, November 1986). I do think, however, that asking the question as they do confuses the issue. What we do need is mandatory health insurance for all those who work, and for dependents as well. Premiums should be withheld from wages. This applies to both immigrants and citizens. Surely, it will take "laws with teeth" to enforce such a policy.

H. A. TILLMANN HEIN, MD
Department of Anesthesiology, Scott and White Clinic, 2401 S 31st St, Temple, TX 76508.

Immigrant health care

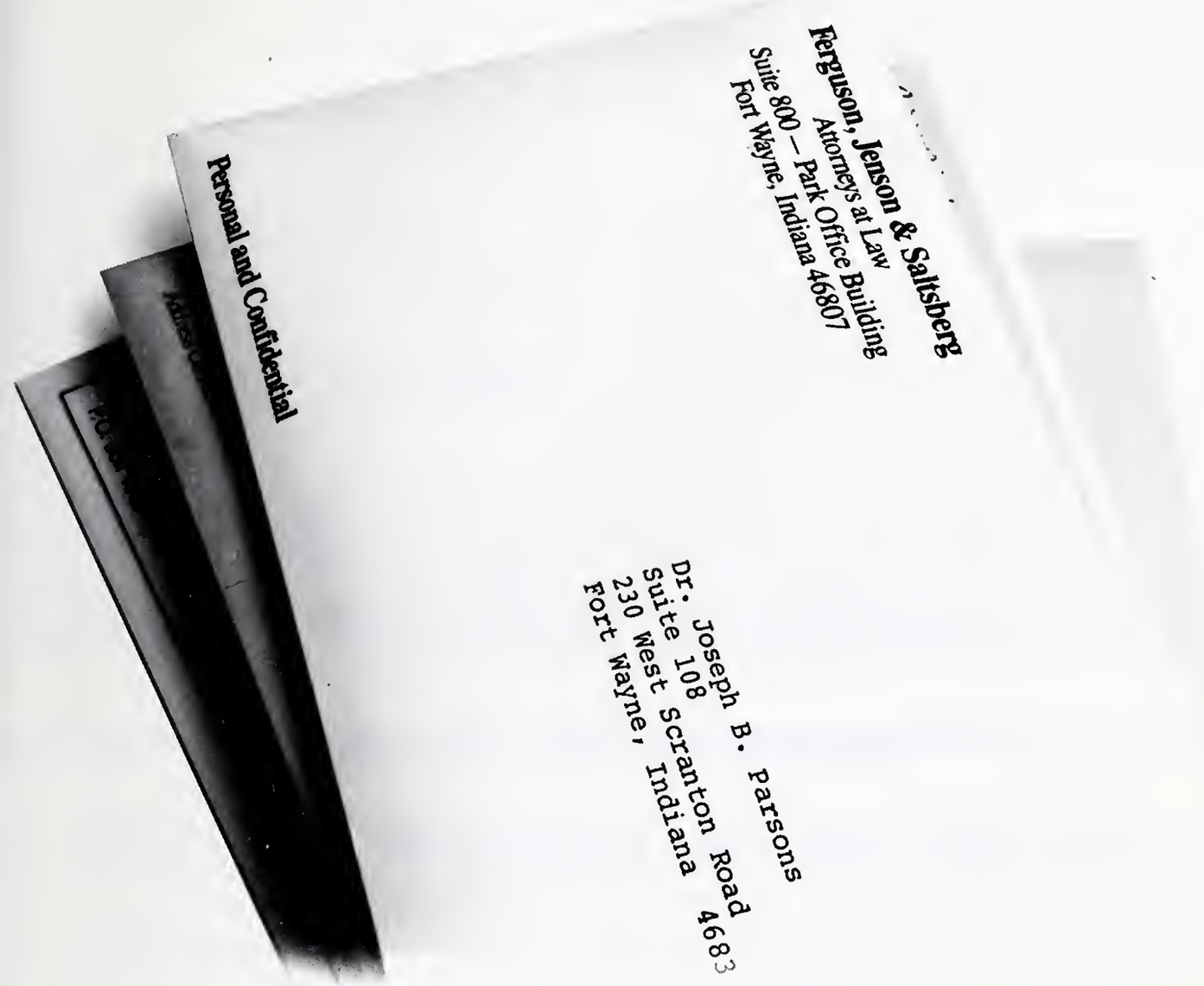
The editorial, "Immigrant health care: Are we responsible, or not?" (*Texas Medicine,* November 1986) was excellent, from my point of view of eight years here on the border with Mexico, serving a Medicaid clientele.

However, I think the decision has already been made: Texas is not willing to properly fund the level of care needed, and neither is the federal government. The $9.27 I am paid for an office visit tells me that neither my Hispanic patients nor their physician is considered worth spending much on. Medicaid routinely denies many services and studies. Yet, there is an expectation that we will provide a "good" level of care.

There should be investigation of why the young people here cannot break the cycle of poverty. Certainly, the girls who become pregnant before finishing high school are doomed to poverty, as the entitlement programs are now structured.

DAVID BLANTON, MD
3125 International Blvd, Brownsville, TX 78521.

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

7

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

The complete journal for family practice physicians

MARCH 1987 / VOL. 9, NO. 3
Family Practice Recertification
Cl. 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Schelbel, MD
Cl. 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Attco, MD • Richard J. Smith, III • Michael A. Friedman
Cl. 1 Communicable diseases
Acquired Immunodeficiency Syndrome, Part 2: The Spectrum of Disease
Navin M. Amin, MD
Cl. 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD
EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION
page 8

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

  Cardiology — Ob/Gyn
  Diabetes — Psychiatry
  Pediatrics — Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA - SUBLCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

News

TMA IN ACTION

House resolves to improve relationship with TMF

Texas Medical Association's House of Delegates has resolved (1) that the Texas Medical Association, through its House of Delegates, review and improve relationships with the Texas Medical Foundation, which is the state's peer review organization for the Medicare program, and (2) that the association inform its members that PRO issues are being appropriately addressed by the TMA Physician Advocacy Committee and by representatives of TMF, the Health Care Financing Administration (HCFA), and the Office of the Inspector General. Wichita County Medical Society proposed the action in Resolution 281.

The house decision followed considerable debate in the Reference Committee on Socioeconomics, which reviewed more than a dozen reports and resolutions about the PRO program during the association's annual session in Houston, May 13–17, 1987. The reference committee recommended adoption of Resolution 281 in lieu of five other resolutions, including two that called for TMA to withdraw from its relationship with the foundation. County society representatives withdrew the two resolutions in view of the achievements of TMA's Physician Advocacy Committee and, along with other hearing participants, commended the committee's work. Advocacy committee chairman Nancy W. Dickey, MD, Richmond, appeared before the reference committee to report that TMF has demonstrated its willingness to talk, and to encourage the association to continue to participate in the review process.

In other actions related to the PRO, the house endorsed six amendments to the PRO law addressing due process concerns and approved 29 recommendations from the Physician Advocacy Committee for improvement of the PRO process. (See related story, p 61.)

Solicitation of private patients by medical schools and the establishment of satellite clinics in the community also stimulated considerable debate during the session. The delegates voted to continue support for a resolution passed in November 1986, which objected to solicitation of private patients from the community and plans for developing satellite clinics by The University of Texas Medical Branch. In addition, the resolution continued TMA policy opposing solicitations of private patients and the purchase of medical practices by state-supported and tax-funded medical schools. Physicians from throughout the state addressed this topic during reference committee hearings, emphasizing that this is not an issue restricted to the Galveston area.

Turning to organizational matters, the house approved the concept of a single board that would consolidate the activities of the Executive Board and Board of Trustees, and referred the matter to the Council on Constitution and Bylaws for development of a specific organizational plan and needed amendments.

In other actions at the Houston meeting, the House of Delegates approved proposals to:

—Support legislation that proposes documented continuing medical education as a condition of relicensure, with specific requirements and safeguards;

—Develop an assistance program for communities with access-to-health-care problems;

—Take steps to ensure that the state adequately fund all medical schools and that the schools admit only the most qualified applicants, and to change appropriations legislation to establish a ceiling on the number of medical students per class;

—Oppose, at this time, routine testing of the general population for acquired immune deficiency syndrome (AIDS);

—Include in the TMA Policy Manual the statement, "The Texas Medical Association opposes any concept of pharmaceutical or therapeutic substitution by pharmacists";

—Revise bylaws language to impose a time limit of "within 30 days of the time the vacancy is declared" for members of TMA boards to petition for reinstatement after failure to attend two consecutive meetings;

—Create a Young Physician Section;

—Study the quality and ethical issues related to hospital and/or managed care plan incentive programs for physicians; and

—Initiate efforts to influence the methods of Medicaid claims review performed by the National Heritage Insurance Company and the selection process for physicians participating in the Medicaid lock-in program.

The Reference Committee on Socioeconomics, meeting during TMA's annual session in Houston, drew a standing-room-only crowd for a hearing on proposals related to the peer review system.

Dr Vanderpool to serve as TMA's 1987–1988 president

Dallas surgeon David Vanderpool, Jr, MD, assumed the presidency of the Texas Medical Association during the association's 120th Annual Session in Houston. Also elected to office during the session were Val F. Borum, MD, Fort Worth, president-elect; E. Rubin Bernhard, MD, San Antonio, vice president; Joseph C. Ogle, MD, Dallas, speaker of the House of Delegates; Sam A. Nixon, MD, Houston, vice-speaker of the House of Delegates; and J. Forrest Fitch, MD, McAllen, trustee. A.P. Thaddeus, MD, San Antonio, was reelected to serve a three-year term as a member-at-large of the Executive Board. Additionally, the House elected five councilors, 11 American Medical Association delegates, and 10 alternate delegates to the AMA.

During ceremonies Saturday, May 16, at the Albert Thomas Convention and Exhibit Center, Dr Vanderpool told a General Meeting Luncheon audience, "I appreciate the privilege and the responsibility (of the presidency). And, I appreciate the awesomeness of the responsibility." He outlined his goals for his term, which will include efforts to unify the profession, continue high ethical standards, serve patients' interests, and develop and polish relationships with other organizations. He concluded his remarks by telling the audience, "You're all leaders of the Texas Medical Association. We're all the voice of medicine."

David Vanderpool, MD, Dallas, assumed the presidency of the Texas Medical Association during the annual session in Houston.

Dr Borum, an anesthesiologist, has been speaker of the TMA House of Delegates since 1984. As speaker, he also was a member of the TMA Executive Board, the Council on Constitution and Bylaws, and the Emergency Policy Board. He is a delegate to the AMA and served on the AMA Advisory Committee on Public Awareness. Dr Borum also has served on and chaired AMA House of Delegates reference committees. He has been a member of the TMA Council on Legislation, Committee on Orientation, and Committee on State Appointments, and was chairman of the Texas Medical Political Action Committee (TEXPAC).

Reelected to the Board of Councilors were Wilbur K. Green, MD, Odessa, District 2; Earl L. Grant, MD, Austin, District 7; Edgar Jones III, MD, Galveston, District 8; John W. Nichols, MD, Galena Park, District 9; and James C. Mann, Jr, MD, Beaumont, District 10. With the exception of Dr Green, who is completing the term of Z.W. Hutcheson, MD, Andrews, which expires in 1988, the councilors' terms will expire in 1990.

Newly elected to serve as delegates to the AMA were George E. Thannisch, MD, Lufkin, and Paul J. Cunningham, MD, Galveston. Reelected to the delegation were Mylie E. Durham, Jr, MD, Houston; Merle W. Delmer, MD, San Antonio; Haden E. McKay, Jr, MD, Humble; S. E. Thompson, MD, Richmond; Milton V. Davis, MD, Kaufman; Mario E. Ramirez, MD, Rio Grande City; George G. Alexander, MD, Houston; R.A.D. Morton, MD, El Paso; and Hugh Lamensdorf, MD, Fort Worth.

Newly elected to serve as alternate AMA delegates were William G. Gamel, MD, Austin; Betty P. Stephenson, MD, Houston; and Robert Mayo Tenery, Jr, MD, Dallas. Returning alternates are James R. Winn, MD, Uvalde; C.L. Montgomery, MD, Lubbock; J. James Rohack, MD, Galveston; Max C. Butler, MD, Houston; J. Forrest Fitch, MD, McAllen; Bernard W. Palmer, MD, San Antonio; and Milton W. Talbot, Jr, MD, Austin.

Dr Ainsworth receives Distinguished Service Award

Texas Medical Association's House of Delegates has presented the association's highest honor, the Distinguished Service Award, to Houston family physician Joseph T. Ainsworth, MD. The ceremony took place during TMA's annual session, May 13–17 in Houston. The delegates also honored Fort Worth pathologist May Owen, MD, as "Texas' great lady of medicine," and the Medical Student Section named Dr Owen the recipient of the first C. Frank Webber, MD, Memorial Award. The House of Delegates elected three physicians members emeritus and commended six members for outstanding service.

Accepting the Distinguished Service Award from George G. Alexander, MD, Houston, TMA's 1984–1985 president, Dr Ainsworth responded, "This is a great day in the life of Joe Ainsworth—probably the greatest day." In addition to his civic activities, Dr Ainsworth has been a member of TMA's Committee on Workers' Compensation and Occupational Medicine; member and chairman of the Council on Public Relations; member, chairman, and consultant to the Council on Medical Legislation (now the Council on Legislation); and a delegate to the American Medical Association. He has been a member of TMA's House of Delegates since 1984. He is associated with M.D. Anderson Hospital and Tumor Institute in Houston.

Drue Ware, MD, Fort Worth, took a point of personal privilege to ask the House of Delegates to recognize and honor Dr Owen, a past president of TMA. Following a standing ovation, Dr Owen told the delegates, "Truly, this is the greatest honor I've ever had." The Medical Student Section cited Dr Owen's strong and innovative support of medical students when presenting her the first C. Frank Webber, MD, Memorial Award.

Elected as members emeritus were Paul R. Meyer, MD, Port Arthur (posthumous); and Nobel Laureates Michael S. Brown, MD, and Joseph L. Goldstein, MD, both of Dallas.

The delegates extended commendations to David Vanderpool, Jr, MD, Dallas; Jim Bob Brame, MD, Eldorado; William F. Powell, MD, Gainesville; and Val Borum,

MD, Fort Worth, for their outstanding service. The House also honored James K. Peden, MD, Dallas, and Braswell Locker, MD, Brookesmith, as they completed their terms as delegates to the American Medical Association.

Members can enjoy discounts on rental cars, hotels

Texas Medical Association members can enjoy a more economical vacation by taking advantage of discounts available through Avis Rent A Car and Inter-Continental Hotels.

Avis offers 10% discounts on SuperValue Weekly Rates, SuperValue Daily rates, or SuperValue Intercity rates worldwide, depending on availability. At the US locations where daily rates or Avis SuperValue Daily rates are not available, members can receive a 40% discount on normal time and mileage rates. To save time at the rental counter at over 47 major US airport locations, Avis offers a Wizard Number that gives access to the Avis Express area. Further information on the program is available from TMA's Office of Member Services, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

Inter-Continental Hotels of Houston, New Orleans, and San Antonio also are participating in a discount program. To take advantage of these special corporate rates, TMA members should identify themselves as such when making reservations at the Hotel Inter-Continental Houston, phone (713)961–1500; Hotel Inter-Continental New Orleans, phone (504) 525–5566; and St Anthony Inter-Continental San Antonio, (512)227–4392.

HEALTH LINE

TDH rules on disposal of radioactive material

The Texas Department of Health has adopted a rule to allow low levels of radioactive material with a half-life of less than 300 days to be disposed of in municipal landfills. The rule, originally proposed by the Texas Low-Level Radioactive Waste Disposal Authority, and sponsored by a consortium of Texas universities and the oil field industry, became effective May 8, 1987.

The disposal method was approved by the Texas Board of Health on April 4, 1987, after a year-long review of a report from the Low-Level Waste Authority that showed that the landfill disposal method would not result in an individual dose exceeding 1 mrem per year. This is the level proposed by the Environmental Protection Agency as the dose level below which there are insignificant health risks and consequently no regulatory concern.

This rule will benefit generators of short-lived, discrete sources of radioactive waste such as that produced by hospitals and universities.

In 1986, the US Congress directed states and compacts to provide for disposal of their own radioactive waste. The Texas rulemaking was the first response to the congressional mandate.

CDC issues precautions for AIDS infection control

Discovery that three hospital workers have become infected with the AIDS virus apparently as the sole result of skin contact with contaminated blood of patients has led the Centers for Disease Control (CDC) to call for strict adherence to AIDS infection-control practices in hospital and other applicable patient-care settings.

CDC officials said each of the incidents was thoroughly investigated. The investigators concluded that skin contact with the blood of AIDS-positive patients was the evident cause of infection since there was no evidence that any of the three individuals used intravenous drugs or were involved in homosexual or heterosexual contacts with individuals known to be at risk of infection.

The CDC emphasized the need to implement and strictly enforce the following recommendations for minimizing the risk of exposure to blood and body fluids of all patients in order to prevent transmission of human immunovirus (HIV) infection in the workplace and during invasive procedures.

1. Routine precautions must be followed when there is a possibility of exposure to blood or other body fluids. The anticipated exposure may require gloves alone (eg, when placing an intravascular catheter or handling items soiled with

John Dozier, MD, Houston, (left) congratulates John Schuchmann, MD, Temple, as Dr Schuchmann completes TMA's three-mile noncompetitive Fun Run. Dr Dozier was chairman of the event.

READ IT AND REAP!

Cost per $1000 monthly benefit
TEXAS MEDICAL ASSOCIATION
Long Term Disability Insurance

WHAT YOU PAY . . . based on a 30 day waiting period.

Your Age:	Monthly Cost*	Average monthly cost based on your present age for continuous coverage to age 70:
Less than age 30	$ 6.33	$28.79
30–39	7.33	32.00
40–44	14.83	36.11
45–49	21.83	40.37
50–54	30.67	45.00
55–59	47.33	49.78
60–64	52.17	51.00
65 & Over	49.83	49.83

*Payments are made on a quarterly basis. Costs are based on current rates.

WHAT YOU GET . . . at no additional cost:

- ✓ Bonafide long-term benefits for total disability to age 70—through the critical years.
- ✓ Long term benefits for partial disability.
- ✓ Definition of disability protects you at your medical specialty—all ages.
- ✓ Up to $8000 monthly benefits regardless of other disability insurance you may have.
- ✓ Claim payments are not reduced by monies you may receive from other disability policies, salary continuation, investments, Social Security.
- ✓ During partial disability, pre-disability earnings are automatically increased by 6 percent annually to guard against erosion of amounts payable.
- ✓ Your waiting period for partial disability is the same as you select for total disability.
- ✓ Survivor Benefit.

WHAT YOU DO NOT GET . . .

- ⊘ Costly frills
- ⊘ Termination at 65—during the critical years
- ⊘ Lesser benefit period after age 60 (See example, page 10, TMA brochure)

OPTIONAL COVERAGES . . .

- ✓ Cost of Living Guardian
- ✓ In-hospital Disability Income

If you do not have a TMA Insurance Brochure dated August, 1986
Call 1-800-252-9318

Texas Medical Association
INSURANCE PROGRAM
1901 North Lamar Blvd, Austin, TX 78705
underwritten by
PRUCO Life Insurance Company of Texas
a subsidiary of the Prudential

blood or equipment contaminated with blood or other body fluids). Procedures involving more extensive contact with blood or potentially infective body fluids (eg, some dental or endoscopic procedures or postmortem examinations) may require gloves, gowns, masks, and eye-coverings. Hands and other contaminated skin surfaces should be washed thoroughly and immediately if accidentally contaminated with blood. These precautions deserve particular emphasis in emergency care settings in which the risk of blood exposure is increased and the infectious status of the patient is usually unknown.

2. If a health care worker has a parenteral or mucous membrane exposure to blood or other body fluids, the source patient should be assessed clinically and epidemiologically to determine the likelihood of HTLV-III/LAV infection. If the assessment suggests that infection may exist, the patient should be informed of the incident and requested to consent to serologic testing for evidence of HTLV-III/LAV infection. If the source patient has AIDS or other evidence of HTLV-III/LAV infection, declines testing, or has a positive test, the health care worker should be evaluated clinically and serologically for evidence of HTLV-III/LAV infection as soon as possible after the exposure, and, if seronegative, retested after 6 weeks and on a periodic basis thereafter to determine if transmission has occurred. During this follow-up period, especially the first 6-12 weeks, when most infected persons are expected to seroconvert, exposed health care workers should receive counseling about the risk of infection and follow US Public Health Service recommendations for preventing transmission of AIDS. If the source patient is seronegative and has no other evidence of HTLV-III/LAV infection, no further follow-up of the health care worker is necessary. If the source patient cannot be identified, decisions regarding appropriate follow-up should be individualized based on the type of exposure and the likelihood that the source patient was infected.

In addition, health care workers who are involved in incidents that result in cutaneous exposures involving large amounts of blood or prolonged contact with blood—especially when the exposed skin is chapped, abraded, or afflicted with dermatitis—should follow these same recommendations. Moreover, serologic testing should be available to all health care workers who are concerned that they may have been infected with HIV.

SOCIOECONOMICS

AMA announces revisions in PRO sanction process

The American Medical Association announced that it will withdraw a lawsuit challenging the peer review organization (PRO) sanction process after several months of negotiations brought about a satisfactory revision of the process. Participating in the negotiations were the AMA, the American Association of Retired Persons (AARP), the Office of the Inspector General, and the Health Care Financing Administration. AMA communications note that the Texas Medical Association and the California Medical Association were "at the forefront of efforts to exert needed change in the sanctions process."

According to the AMA, previous lack of fairness in the sanctions process has persistently riled the profession and frequently left physicians without practical recourse other than bringing costly litigation to protect their professional reputations and rights. The new procedures, which will appear in a revised PRO manual provide:

—More adequate notice of the basis of a charge, the physician's rights, and the consequences of a PRO hearing;

—A transcript of the "discussion";

—The right to counsel;

—Relaxed confidentiality rules that allow experts access to records;

—Exclusion of PRO physicians in direct economic competition;

—Five-day rebuttal opportunity after the "discussion" to present new evidence;

—Elimination of the requirement of newspaper notice of sanction at the option of the physician, who may inform beneficiaries himself (this change will be accomplished following public notice and comment);

TMA's 1986–1987 President Jim Bob Brame, MD, Eldorado, (center) appears before the House Subcommittee on Health and the Environment of the Energy and Commerce Committee in Washington, DC. With Dr Brame are Texas Congressmen Ralph M. Hall (D-Rockwall) (left) and Charles W. Stenholm (D-Stamford), co-sponsors of legislation to provide for due process in PRO deliberations. Due process provisions subsequently were incorporated into a revised PRO manual, but the legislation still was pending at press time.

Hospital Medical Staff Section Meeting

May 16 and 17, 1987

Saturday 2-5 p.m./Sunday 8 a.m.-12 noon

Hyatt Regency Hotel - Houston

Imperial Ballroom

Program

"Underutilization In The Delivery Of Health Care Services"

Saturday May 16	2:15 p.m.	Restrictive Health Care Delivery and Quality Assurance: Implications and Overview	Howard Lang, M.D. Chairman, AMA-HMSS
Tape 1	2:55 p.m.	The Consumer's Perspective	Mr. Jack Danley, Member TMA-AARP Liaison Comm.
	3:15 p.m.	Quality Assurance Activities	Stuart Polly, M.D. Associate Chairman Dept. of Internal Medicine Texas Tech Univ. HSC
Tape 2	3:30 p.m.	JCAH Objectives—From Process Monitoring to Measuring Outcome	Joseph T. Painter, M.D. Commissioner, JCAH
	4:00 p.m.	PRO Objectives and Measurements for Quality Assurance—What the Physician Must Know and Do to Comply	Charles Cain, M.D. Chairman, Statewide QAC Texas Medical Foundation
	4:30 p.m.	Question and Answer Panel: Charles Cain, M.D. Howard Lang, M.D. Joseph T. Painter, M.D. Stuart Polly, M.D.	Moderator: Albert F. Hendler, M.D.
Sunday May 17	8:00 a.m.	Reconvene	Robert Carroll, Jr., M.D. Vice Chairman, TMA-HMSS
Tape 3	8:05 a.m.	Preserving Revenue Through Appropriate Coding and Billing Techniques/The Impact of SOBRA and the Medicare MAAC	Harold Whittington, President Harold Whittington & Asso.
Tape 4	9:30 a.m.	Consent for Treatment	Helene Alt, J.D. Assistant General Counsel Texas Medical Association

Tape Order Form HMSS Meeting May 16 and 17, 1987

Individual audio cassette tapes are $7.95 each, plus 7¼% sales tax.

☐ Tape 1 ☐ Tape 2 ☐ Tape 3 ☐ Tape 4

Cost _____

Sales Tax _____

Total _____

Order tapes and we will send you a statement for paym your tapes are mailed to you.

Name _____

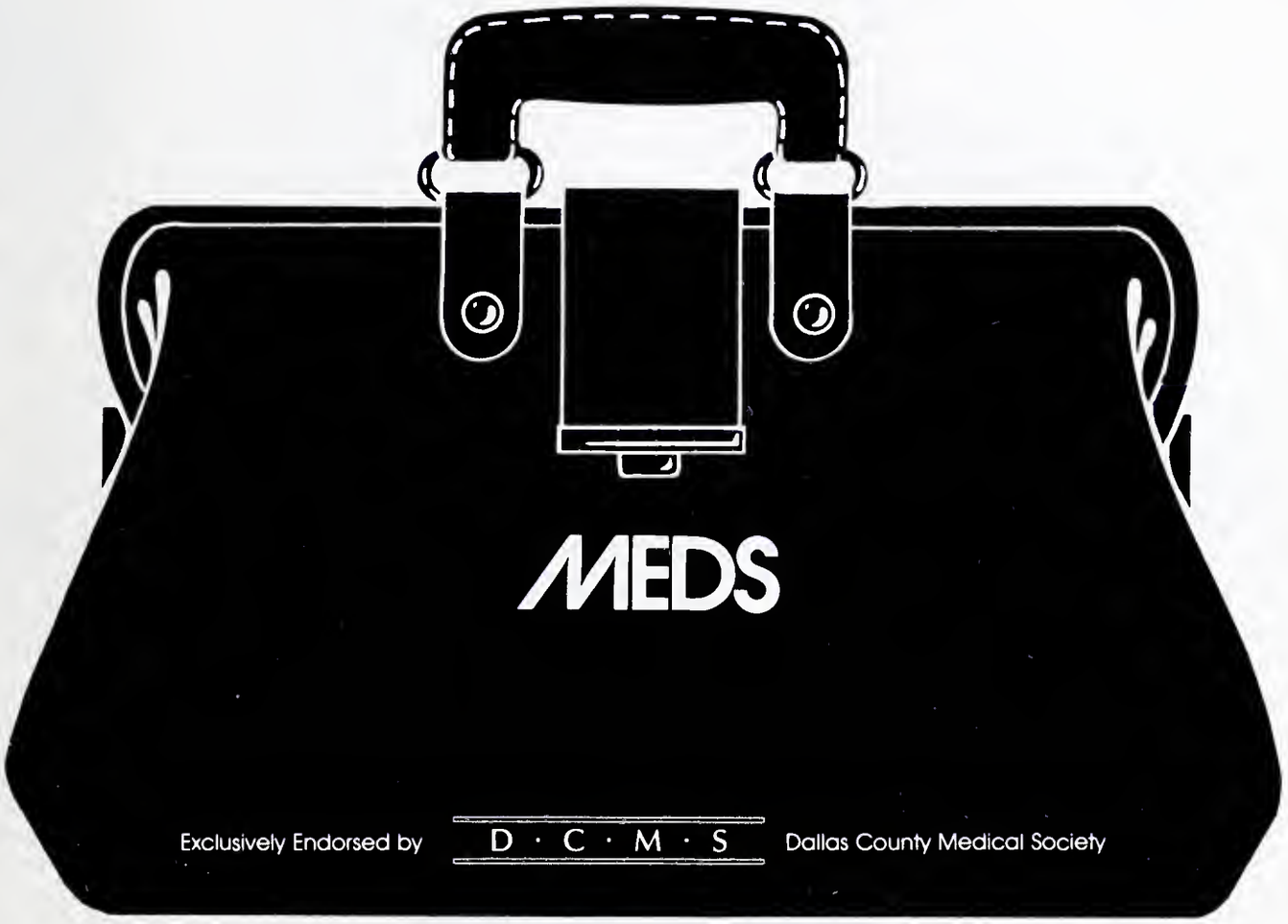
Address _____

City _____ Zip _

For additional information, contact Dept. of Health Car Delivery, 1801 North Lamar Blvd., Austin, Texas 78701 512/477-6704, ext. 260.

Physicians Computerized Office Management System

WE MAKE HOUSE CALLS



Exclusively Endorsed by D · C · M · S Dallas County Medical Society

MEDS will individually tailor an Office Management system to fit your practice needs. Texas based, MEDS has been satisfying the data processing needs of physicians across the Southwest for over eight years. MEDS systems help simplify and streamline the increasingly complex problem of managing your practice. Contact us so that we can show you all the ways your practice can benefit from a system of your own.

MEDS PROVIDES

- Electronic claims submissions
- State of the art hardware
- Ongoing on site training
- Patient scheduling and recall
- Insurance filing and tracking

MEDS

Carparate Office Dallas
Ten Thausand Central Suite 1000
10000 Narth Central Expy. Dallas, Texas 75231
(214) 739-3737

Medical Data Systems, Inc.
CALL TOLL FREE
1 (800) 272-MEDS

Austin Office
H & K Executive Suites
1104 S Mays Raund Rack, Texas 78664
(512) 388-4642

—Recognition of usefulness of screening PRO physician presence at a PRO hearing;

—Exclusion of screening PRO physician from voting on sanction at PRO level;

—Clarification of the administrative law judge procedure as *de novo* review, including the right to request that witnesses be subpoenaed and the right to present new evidence. (Left unresolved is the right to cross-examine the PRO screening physicians. The Department of Health and Human Services has committed to a meeting to explore this issue.)

Additionally, the HCFA and OIG will review the administrative law judge hearing process to determine how to shorten the hearing process and to reduce the span of time between the request for a hearing and the resolution of the case. By late spring, HCFA was expected to have convened a meeting with representatives of PROs, beneficiaries, providers, and practitioners involved with the PRO/administrative law judge process to discuss other possible improvements.

Announcing the changes on May 13, 1987, AMA General Counsel Kirk Johnson, JD, observed, "The AMA is pleased and encouraged by the changes the federal government has agreed to make in the sanction procedures of peer review organizations. The changes were necessary to give the sanction process a level of fairness and to make it more efficient.

"Peer review of the quality of medical care has always been a special aspect and special obligation of the medical profession. But to have the active participation and support of physicians, the process must be fair to the challenged physician, and it must be designed to produce a full examination of the challenged conduct. The PRO sanction process has not been fair, nor has it always produced a complete, expert review of the medical care at issue. That is why the AARP has joined with the AMA in seeking changes and is a party with the AMA to the joint announcement of changes."

Physicians must work hard to overcome challenges

American Medical Association President John J. Coury, Jr, MD, is optimistic that the 12 most pressing challenges to the medical profession can be overcome with hard work from all physicians. Dr Coury outlined the challenges during a general meeting luncheon held in conjunction with Texas Medical Association's annual session, Friday, May 15, 1987, in Houston.

Dr Coury's list of challenges included:

Professional liability. Dr Coury noted that tort reform has not lowered professional liability insurance premiums and suggested that "alternative payment systems" for compensating victims of medical malpractice are "the way we'll have to go." He added that Indiana, often used as an example of successful tort reform, has a patient compensation fund.

Medical decision-making. Physicians—not businessmen or other third parties—should make medical decisions.

Professional review organizations (PROs). There is "no standardization of standards throughout the country," Dr Coury said. He added that a revised PRO manual encourages due process. "This is a great step forward for all of us," he said.

Diagnosis-related groups (DRGs) for physicians. Dr Coury reported that concurrent resolutions in the US House of Representatives and the US Senate are gaining momentum. The resolutions express the congressmen's opposition to using DRGs as a basis of payment for hospital-based radiologists, pathologists, and anesthesiologists, as presented in a presidential budget proposal.

Mandatory assignment. Dr Coury pointed to the situation in Massachusetts where licensure is tied to acceptance of Medicare payments as a "participating physician," as unconstitutional. He promised that the law will be challenged in the US Supreme Court, adding that eight states are waiting to pass similar legislation.

Manpower. There are too many physicians, Dr Coury said. "A busy physician is a good physician."

International terrorism of animal research labs. Dr Coury cited several incidents in which "so-called humane animal lovers" have blown up animal research labs, killing and injuring people in the process. Every major medical advance over the last several years has included animal research, Dr Coury said.

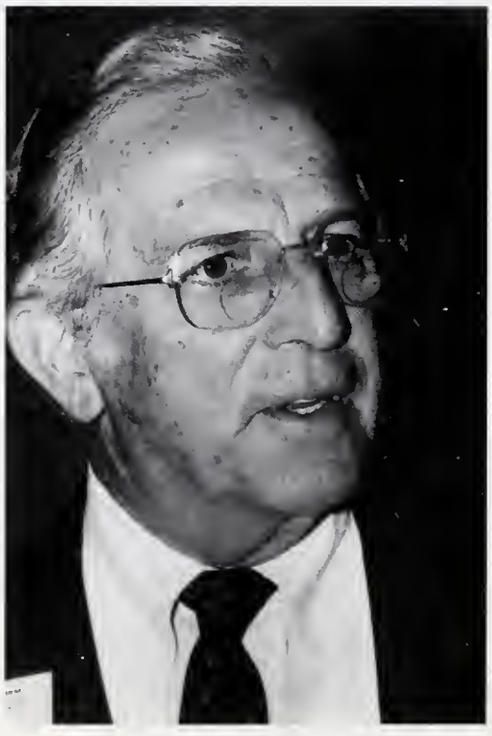
The physician-patient relationship. Physicians must maintain the sanctity of this relationship, Dr Coury said.

Quality of care. Conceding that "not all prepaid plans are bad," Dr Coury added that these plans challenge physicians to keep costs low while maintaining quality. "Quality of care is not negotiable," he said.

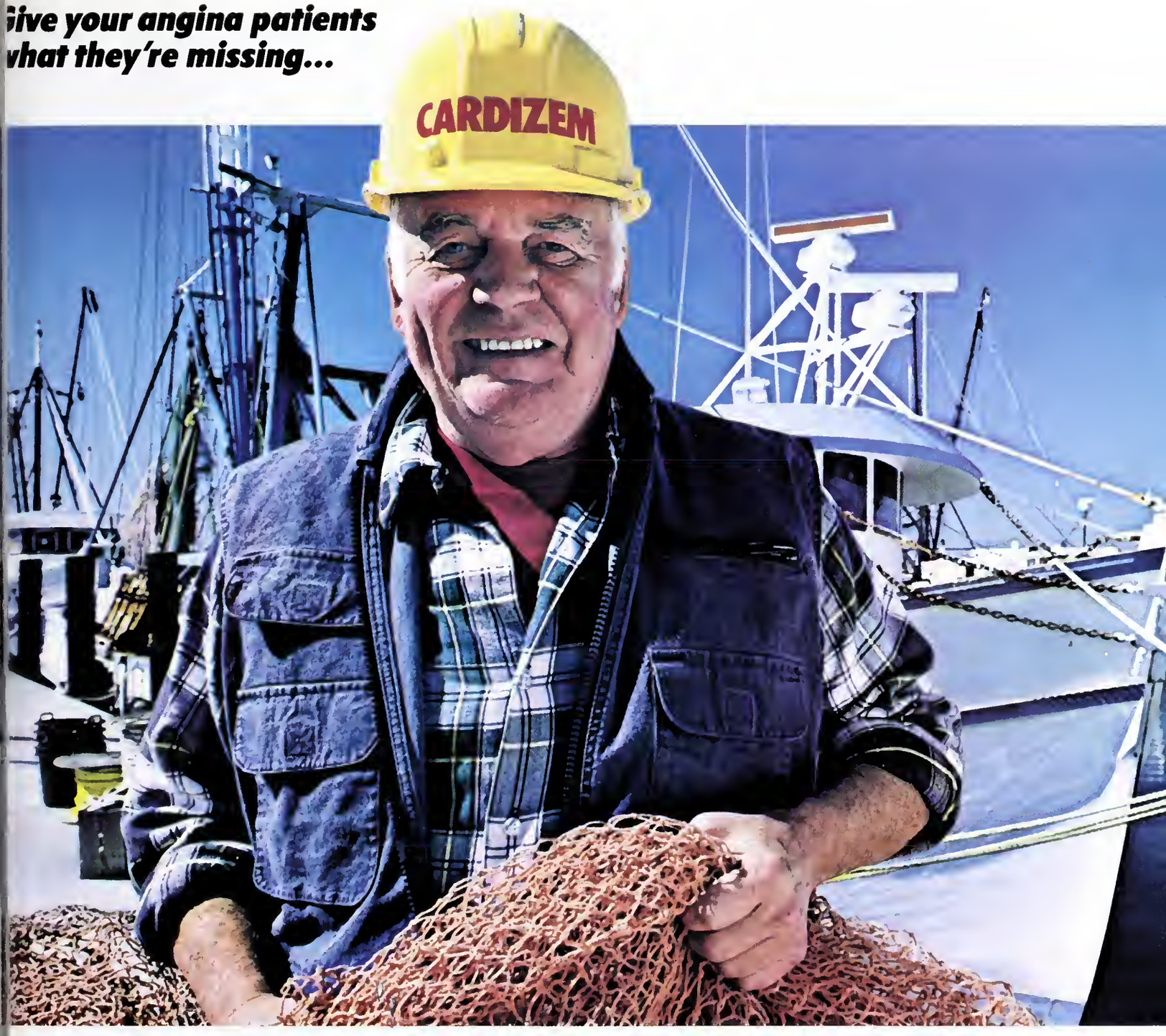
Public funding for political campaigns. Dr Coury observed that proposed legislation to restrict political action committee (PAC) contributions to candidates for public office is ill-conceived and favorable to incumbents. "PACs are still a democratic process in this country," he said.

Acquired immune deficiency syndrome (AIDS). Dr Coury noted the alarming rate at which the number of AIDS cases is increasing. "Physicians and nurses should continue to take care of people in an understanding and compassionate way," he said.

American Medical Association President John J. Coury, MD, Port Huron, Mich, outlines the 12 most pressing challenges facing the medical profession during a luncheon at the annual session.



Give your angina patients what they're missing...



CARDIZEM® FEW SIDE EFFECTS

diltiazem HCl/Marion

- **Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate**
- **Proven efficacy when used alone in angina[1]**
- **Compatible with other antianginals[2,3]***
- **A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]**

90 mg GREATER DOSAGE FLEXIBILITY NEW 120 mg

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 7/86

See complete Professional Use Information before prescribing.

References: 1. Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers. Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983, 106(6):1341-1347 **2.** Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159 **3.** Johnston DL, Lesaway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study Am J Cardiol 1985;55:680-687. **4.** Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39 **5.** Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0246M6

To show you how many hypertensives stayed on INDERAL® LA (PROPRANOLOL HCl) after a major nationwide trial...

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL LA stayed on INDERAL LA.[1*]

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.
A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl)
LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

NOW AVAILABLE...
NEW LOW DOSE
INDERAL LA 60 mg
(PROPRANOLOL HCl)
LONG ACTING CAPSULES

Please see next page for brief summary of prescribing information

The one you know best keeps looking bette

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may l return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with seve disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such a pine should be closely observed if INDERAL is administered. The added catecho blocking action may produce an excessive reduction of resting sympathetic nervous which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or ort hypotension.

Caution should be exercised when patients receiving a beta blocker are adminis calcium-channel-blocking drug, especially intravenous verapamil, for both agents r press myocardial contractility or atrioventricular conduction. On rare occasions, the c tant intravenous use of a beta blocker and verapamil has resulted in serious adverse re especially in patients with severe cardiomyopathy, congestive heart failure or recent dial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitan propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used conco with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying eliminat increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term st animals have been conducted to evaluate toxic effects and carcinogenic potentia month studies in both rats and mice, employing doses up to 150 mg/kg/day, there evidence of significant drug-induced toxicity. There were no drug-related tumorigenic at any of the dosage levels. Reproductive studies in animals did not show any impai fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryc animal studies at doses about 10 times greater than the maximum recommended huma

There are no adequate and well-controlled studies in pregnant women. INDERAL sh used during pregnancy only if the potential benefit justifies the potential risk to the fet

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be e when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and ha required the withdrawal of therapy.

Cardiovascular: Bradycardia, congestive heart failure, intensification of AV block; h sion; paresthesia of hands; thrombocytopenic purpura, arterial insufficiency, usual Raynaud type.

Central Nervous System: Light-headedness, mental depression manifested by in lassitude, weakness, fatigue; reversible mental depression progressing to catatoni disturbances, hallucinations; vivid dreams, an acute reversible syndrome characte disorientation for time and place, sh memory loss, emotional lability, clouded sensorium, and decreased mance on neuropsychometrics. For im formulations, fatigue, lethargy, ar dreams appear dose related.

Gastrointestinal: Nausea, vomiting, tric distress, abdominal cramping, c constipation, mesenteric arterial thro ischemic colitis.

Allergic: Pharyngitis and agranulc erythematous rash, fever combined v ing and sore throat, laryngospasm and tory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic

Auto-Immune: In extremely rare instances, systemic lupus erythematosus h reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male imp and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions i the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochlo sustained-release capsule for administration once daily. If patients are switched from II Tablets to INDERAL LA Capsules, care should be taken to assure that the desired the effect is maintained. INDERAL LA should not be considered a simple mg-for-mg subs INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitra be necessary, especially to maintain effectiveness at the end of the 24-hour dosing i

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage INDERAL LA once daily, whether used alone or added to a diuretic. The dosage increased to 120 mg once daily or higher until adequate blood-pressure control is a The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosa mg may be required. The time needed for full hypertensive response to a given d variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDE once daily, dosage should be gradually increased at three- to seven-day intervals unt response is obtained. Although individual patients may respond at any dosage average optimal dosage appears to be 160 mg once daily. In angina pectoris, the v safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few we WARNINGS)

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDI once daily. The usual effective dose range is 160-240 mg once daily. The dosage increased gradually to achieve optimal migraine prophylaxis. If a satisfactory respor obtained within four to six weeks after reaching the maximal dose, INDERAL LA therap be discontinued. It may be advisable to withdraw the drug gradually over a period weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laborator

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Labo
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, ox atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

R7

Ayerst® AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Lab

Adolescent health. "We must stop the problem" of increasing numbers of pregnancies, abortions, accidents, and sexually transmitted diseases among this age group, Dr Coury said.

Schenken calls for changes in Medicare financing

The elderly poor must not subsidize the elderly wealthy," according to Jerald B. Schenken, MD, an Omaha pathologist who has been a member of the American Medical Association's Board of Trustees since June 1985. During a luncheon for the members of Texas Medical Association's House of Delegates, Thursday, May 4, in Houston, Dr Schenken discussed the expansion of health care coverage that culminated in the birth of the Medicare program, the intended and unintended results of that expansion, and proposals for restructuring the Medicare program.

In a brief historical overview of the government's expanding role in providing health care, Dr Schenken noted that industry did not want to provide health care to its employees after the war, and that there was a shortage of physicians at the time. In response to those environmental factors, the government offered tax incentives to employers and encouraged the training of more physicians through the Hill-Burton Act. In 1965, Medicare was enacted, and in 1972, the social security program expanded its coverage to include treatment of end stage renal disease.

The anticipated results of this expanding governmental role were wide availability of health insurance, increases in the numbers of hospitals and health professionals, and increased access to health care. "The health of Americans has never been better," Dr Schenken observed.

However, he continued, there also were unanticipated results of this expansion—developments that could have been predicted, but were not: the total health care bill increased geometrically, use of hospitals increased, insurance covered "everything," there was an "explosion of services," payments for services were transferred to future generations, and patients' expectations became unrealistic.

Zeroing in on Medicare, Dr Schenken reminded the audience that the AMA predicted Medicare would be too expensive at its inception. He added his perceptions of what is wrong with the program: it is actuarially unsound, it lacks catastrophic coverage, the young pay for the old, it is over-regulated, and it is heading for bankruptcy. He suggested that a "means test" that would base Medicare premiums on the recipient's income would more fairly distribute the program's cost and help solve the problem of the poor subsidizing the wealthy.

Public survey reaffirms TMA, access to care is down

A public survey by the Robert Wood Johnson Foundation concludes that access to medical care has deteriorated. The foundation reaffirms Texas Medical Association's survey of physicians in 1986. While the foundation survey does not indicate the causes of the declining access, TMA's survey tied the trend to escalating professional liability insurance rates and increasing numbers of lawsuits.

"Access to Health Care in the United States: Results of a 1986 Survey" draws attention to the declines in access to medical care among the poor since a similar national survey in 1982. The foundation measured access by a combination of factors: use of various health services, including physicians, hospitals, and emergency rooms; satisfaction with the care received; and health status.

According to the report, some of the most striking declines in access to health care have occurred among the nation's Hispanic population. The percentage of Hispanics reporting no regular source of care tripled (from 10% to 30%) since the foundation's 1982 survey. Twenty percent of Hispanics report themselves in fair or poor health, and one in five is uninsured. (In 1980, Hispanics comprised 21% of the total population of Texas, compared to 6% of the nation as a whole. Texas had one fifth of the nation's Hispanics—2,985,643—in 1980 and ranked second among all states. The Hispanic population is concentrated in South and West Texas, but there is not a single county that does not have some Hispanics.)

Among the other major findings in the Robert Wood Johnson Foundation report:

1. More than 16% of Americans—38.8 million people—needed health care during the year before the survey but had difficulty obtaining it. For half of these, the problem was financial; an estimated 1 million people actually tried to obtain care but could not afford it.
2. Eighteen percent of respondents, or nearly 43 million Americans, say they have no physician, clinic, or hospital that is their regular source of medical care.
3. For the adult poor, the number of ambulatory visits declined by 30% between 1982 and 1986. For the elderly poor, ambulatory visits declined 20%. In addition, nearly 16% of people with a chronic or serious illness did not have an ambulatory visit in the year prior to the survey.
4. Hospitalization rates declined by 29% for all groups. The insured were hospitalized at a rate one-and-a-half times greater than the uninsured.
5. One third of poor children did not have an ambulatory visit in the year prior to the survey, compared to 23% of nonpoor children. Twice as many poor as nonpoor children had no regular source of medical care (15% versus 7%).

CAPITAL COMMENTS

Resolutions gain momentum, 309 representatives lend support

Nonbinding resolutions opposing the concept of physician payments based on diagnosis-related groups continue to gain momentum in Congress despite the fact that the American College of Radiology, one of the three specialties affected by a budget proposal to implement the system, has declined to support efforts to make Congressional support unanimous.

In a statement before the House of Representatives Subcommittee on Health, ACR joined the American Society of Anesthesiologists (ASA) and the College of American Pathologists (CAP) in opposing DRGs for the three specialties. The ACR's statement, however continued, "We have taken a lot of lumps

within the family of organized medicine because we declined to participate in seeking sponsors for the nonbinding resolutions . . . ."

The statement went on to explain the ACR's reasons for declining to support the resolutions:

"We declined to participate in the resolutions because we believe in the institution of Congress and we believed that you and your committee would provide a means of input if and when legislation was introduced on (hospital-based radiologists, anesthesiologists, and pathologists) DRGs.

"We also declined to participate because the resolutions call for postponement of discussion on reimbursement issues until the large number of studies are complete. Frankly, . . . we did not want to give the impression that we are enamored with some of the ongoing studies, particularly the Harvard relative value scale study, which we believe, based on our attempts to be involved in the study, has serious flaws."

At press time, the resolution had 309 cosponsors in the US House of Representatives and 43 cosponsors in the US Senate. Nineteen of Texas' 27 representatives had become cosponsors: Michael Andrews (D-Houston), Bill Archer (R-Houston), Steve Bartlett (R-Dallas), Beau Boulter (R-Amarillo), John Bryant (D-Dallas), Albert Bustamente (D-San Antonio), Jim Chapman (D-Sulphur Springs), Ronald Coleman (D-El Paso), Larry Combest (R-Lubbock), Kika de la Garza (D-Mission), Tom DeLay (R-Stafford), Jack Fields (R-Humble), Ralph Hall (D-Rockwall), Marvin Leath (D-Waco), Solomon Ortiz (D-Corpus Christi), Lamar Smith (R-San Antonio), Charles Stenholm (D-Stamford), Mac Sweeney (R-Wharton), and Charles Wilson (D-Lufkin).

Catastrophic coverage gets nod, but not mandated assignment

The US House of Representatives Ways and Means Committee has approved an amended version of the Stark-Gradison catastrophic coverage bills (HR 1280 and HR 1281) and defeated an amendment that would have mandated assignment.

Offered by Congressman Brian Donnelly (D-Mass), the amendment would have required physicians to accept assignment on all claims for Medicare patients whose expenses for covered services exceeded the Part B catastrophic limit of $1,000 per year. If the physician billed a patient for the balance and knew or should have known that the patient had exceeded the catastrophic limit, the physician would have been subject to civil monetary penalties.

As passed out of the Ways and Means Committee, the catastrophic coverage bills limit Medicare beneficiaries' liability for covered expenses to about $1,700 per year indexed for inflation. The catastrophic coverage benefit is funded by a mandatory, income-related premium added onto the current Part B premium. An elderly couple with an annual income of less than $10,000 would pay $1.50 more per month. However, an elderly couple with income of $20,000 would pay an additional premium of about $44 per month.

Texans serving on the Ways and Means Committee are J. J. Pickle (D-Austin), Mike Andrews (D-Houston), and Bill Archer (R-Houston).

While mandated assignment suffered a blow at the federal level, Vermont's legislature has passed legislation requiring physicians to accept the Medicare "reasonable charge" for individuals with incomes less than $25,000 and couples with incomes less than $32,000. Compliance will be validated by the Secretary of State and is not tied to physician licensure.

NEWSMAKERS

HOMER E. PRINCE, MD, a pioneer in allergy research, was the guest of honor at a luncheon and reception in May recognizing the creation of the Homer E. Prince Development Fund at Southwest Texas State University in San Marcos. The fund was created by the dissolution of a corporation founded years ago by Dr Prince and allergists Warren J. Raymer, MD, and T.S. Painter, Jr, MD, and George H. Meyer, a professor of biology at SWT. The endowment will develop into the establishment of the Homer E. Prince Endowed Chair in Microbiology, the first endowed chair in the School of Science.

LAWRENCE "LARRY" A. STONE, MD, has been appointed executive medical director for Laurel Ridge, a Brown Schools' psychiatric hospital under construction in San Antonio. Dr Stone formerly was senior child psychiatrist at the San Antonio Children's Center. He is a clinical associate professor of psychiatry at The University of Texas Health Science Center at San Antonio.

FRANK M. YATSU, MD, professor and chairman of neurology at The University of Texas Medical School at Houston, has been appointed as a councilor to the American Academy of Neurology's executive board.

BENOIT DE CROMBRUGGHE, MD, has been named chairman of the department of genetics at The University of Texas M.D. Anderson Hospital and Tumor Institute. Dr de Crombrugghe joins M.D. Anderson Hospital from the National Cancer Institute, where he has held a va-

TMA President-elect Val Borum, MD, Fort Worth, and Mrs Borum enjoy Tarrant County Medical Society's "night cap," a coffee and dessert party, during the annual session in Houston.

Mean,

Powerful against susceptible pathogens.*

lean &

Easy on tight budgets.

clean.

Gentle to patients (generally well tolerated).

The one antimicrobial that belongs on every formulary.

Once-a-day Rocephin® ROCHE IV·IM ceftriaxone sodium/Roche

25

* ROCEPHIN is indicated in the following infections: bacterial septicemia, bone and joint, intra-abdominal, lower respiratory tract, skin and skin structure, urinary tract, bacterial meningitis and gonorrhea. Please see summary of product information on adjacent page for indicated susceptible organisms.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved

Please see adjacent page for summary of product information.

Rocephin® IV·IM

ceftriaxone sodium/Roche

Before prescribing, please consult complete product information, a summary of which follows:

MICROBIOLOGY The bactericidal activity of ceftriaxone results from inhibition of cell wall synthesis. Ceftriaxone has a high degree of stability in the presence of beta-lactamases, both penicillinases and cephalosporinases, of gram-negative and gram-positive bacteria. Ceftriaxone is usually active against the following microorganisms *in vitro* and in clinical infections (see Indications and Usage):

GRAM-NEGATIVE AEROBES: *Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae* (including ampicillin-resistant strains), *H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *Neisseria gonorrhoeae* (including penicillinase and nonpenicillinase producing strains), *Neisseria meningitidis, Proteus mirabilis, Proteus vulgaris, Morganella morganii* and *Serratia marcescens*.

Note: Many strains of the above organisms that are multiply resistant to other antibiotics, e.g., penicillins, cephalosporins and aminoglycosides, are susceptible to ceftriaxone sodium.

Ceftriaxone is also active against many strains of *Pseudomonas aeruginosa*.

GRAM-POSITIVE AEROBES: *Staphylococcus aureus* (including penicillinase-producing strains) and *Staphylococcus epidermidis* (Note: methicillin-resistant staphylococci are resistant to cephalosporins, including ceftriaxone), *Streptococcus pyogenes* (Group A beta-hemolytic streptococci), *Streptococcus agalactiae* (Group B streptococci) and *Streptococcus pneumoniae* (Note: Most strains of enterococci, *Streptococcus faecalis* and Group D streptococci are resistant.)

Ceftriaxone also demonstrates *in vitro* activity against the following microorganisms, although the clinical significance is unknown.

GRAM-NEGATIVE AEROBES: *Citrobacter freundii, Citrobacter diversus, Providencia* species (including *Providencia rettgeri*), *Salmonella* species (including *S typhi*), *Shigella* species and *Acinetobacter calcoaceticus*.

ANAEROBES: *Bacteroides* species, *Clostridium* species (Note: most strains of *C difficile* are resistant).

SUSCEPTIBILITY TESTING: Standard susceptibility disk method. Quantitative methods that require measurement of zone diameters give the most precise estimate of antibiotic susceptibility. One such procedure (Bauer AW, Kirby WMM, Sherris JC, Turck M: Antibiotic Susceptibility Testing by a Standardized Single Disk Method, *Am J Clin Pathol* 45: 493-496, 1966, Standardized Disk Susceptibility Test, *Federal Register* 39: 19182-19184, 1974, National Committee for Clinical Laboratory Standards, Approved Standard ASM 2, Performance Standards for Antimicrobial Disk Susceptibility Tests, July 1975) has been recommended for use with disks to test susceptibility to ceftriaxone.

Laboratory results of the standardized single-disk susceptibility test using a 30-mcg ceftriaxone disk should be interpreted according to the following three criteria:

1. Susceptible organisms produce zones of 18 mm or greater, indicating that the tested organism is likely to respond to therapy.
2. Organisms that produce zones of 14 to 17 mm are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained.
3. Resistant organisms produce zones of 13 mm or less, indicating that other therapy should be selected.

Organisms should be tested with the ceftriaxone disk, since ceftriaxone has been shown by *in vitro* tests to be active against certain strains found resistant to cephalosporin class disks.

Organisms having zones of less than 18 mm around the cephalothin disk are not necessarily of intermediate susceptibility or resistant to ceftriaxone.

Standardized procedures require use of control organisms. The 30-mcg ceftriaxone disk should give zone diameters between 29 and 35 mm, 22 and 28 mm and 17 and 23 mm for the reference strains *E coli* ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853, respectively.

DILUTION TECHNIQUES: Based on the pharmacokinetic profile of ceftriaxone, a bacterial isolate may be considered susceptible if the MIC value for ceftriaxone is not more than 16 mcg/ml. Organisms are considered resistant to ceftriaxone if the MIC is equal to or greater than 64 mcg/ml. Organisms having an MIC value of less than 64 mcg/ml, but greater than 16 mcg/ml, are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained.

E coli ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853 are also the recommended reference strains for controlling ceftriaxone dilution tests. Greater than 95% of MICs for the *E coli* strain should fall within the range of 0.016 to 0.5 mcg/ml. The range for the *S aureus* strain should be 1 to 2 mcg/ml, while for the *P aeruginosa* strain the range should be 8 to 64 mcg/ml.

INDICATIONS AND USAGE: Rocephin is indicated for the treatment of the following infections when caused by susceptible organisms:

LOWER RESPIRATORY TRACT INFECTIONS caused by *Strep. pneumoniae, Streptococcus* species (excluding enterococci), *Staph. aureus, H influenzae, H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *E coli, E. aerogenes, Proteus mirabilis* and *Serratia marcescens*.

SKIN AND SKIN STRUCTURE INFECTIONS caused by *Staph aureus, Staph epidermidis, Streptococcus* species (excluding enterococci), *E cloacae, Klebsiella* species (including *K pneumoniae*), *Proteus mirabilis* and *Pseudomonas aeruginosa*.

URINARY TRACT INFECTIONS (complicated and uncomplicated) caused by *E coli, Proteus mirabilis, Proteus vulgaris, M morganii* and *Klebsiella* species (including *K pneumoniae*).

UNCOMPLICATED GONORRHEA (cervical/urethral and rectal) caused by *Neisseria gonorrhoeae*, including both penicillinase and nonpenicillinase producing strains.

PELVIC INFLAMMATORY DISEASE caused by *N gonorrhoeae*.

BACTERIAL SEPTICEMIA caused by *Staph aureus, Strep pneumoniae, E coli, H influenzae* and *K pneumoniae*.

BONE AND JOINT INFECTIONS caused by *Staph. aureus, Strep pneumoniae, Streptococcus* species (excluding enterococci), *E coli, P mirabilis, K pneumoniae* and *Enterobacter* species.

INTRA-ABDOMINAL INFECTIONS caused by *E coli* and *K pneumoniae*.

MENINGITIS caused by *H influenzae, N meningitidis* and *Strep pneumoniae*. Ceftriaxone has also been used successfully in a limited number of cases of meningitis and shunt infections caused by *Staph epidermidis* and *E coli*.

PROPHYLAXIS: The administration of a single dose of ceftriaxone preoperatively may reduce the incidence of postoperative infections in patients undergoing coronary artery bypass surgery.

Although ceftriaxone has been shown to have been as effective as cefazolin in the prevention of infection following coronary artery bypass surgery, no placebo-controlled trials have been conducted to evaluate any cephalosporin antibiotic in the prevention of infection following coronary artery bypass surgery.

SUSCEPTIBILITY TESTING: Before instituting treatment with Rocephin, appropriate specimens should be obtained for isolation of the causative organism and for determination of its susceptibility to the drug. Therapy may be instituted prior to obtaining results of susceptibility testing.

CONTRAINDICATIONS: Rocephin is contraindicated in patients with known allergy to the cephalosporin class of antibiotics.

WARNINGS: BEFORE THERAPY WITH ROCEPHIN IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE TO DETERMINE WHETHER THE PATIENT HAS HAD PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS, PENICILLINS OR OTHER DRUGS. THIS PRODUCT SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. ANTIBIOTICS SHOULD BE ADMINISTERED WITH CAUTION TO ANY PATIENT WHO HAS DEMONSTRATED SOME FORM OF ALLERGY, PARTICULARLY TO DRUGS. SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE THE USE OF SUBCUTANEOUS EPINEPHRINE AND OTHER EMERGENCY MEASURES.

Pseudomembranous colitis has been reported with the use of cephalosporins (and other broad-spectrum antibiotics); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with antibiotic use.

ROCEPHIN® (ceftriaxone sodium/Roche)

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis. Cholestyramine and colestipol resins have been shown to bind to the toxin *in vitro*.

Mild cases of colitis respond to drug discontinuance alone. Moderate to severe cases should be managed with fluid, electrolyte and protein supplementation as indicated.

When the colitis is not relieved by drug discontinuance or when it is severe, oral vancomycin is the treatment of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile*. Other causes of colitis should also be considered.

PRECAUTIONS: *GENERAL*: Although transient elevations of BUN and serum creatinine have been observed, at the recommended dosages, the nephrotoxic potential of Rocephin is similar to that of other cephalosporins.

Ceftriaxone is excreted via both biliary and renal excretion (see Clinical Pharmacology). Therefore, patients with renal failure normally require no adjustment in dosage when usual doses of Rocephin are administered, but concentrations of drug in the serum should be monitored periodically. If evidence of accumulation exists, dosage should be decreased accordingly.

Dosage adjustments should not be necessary in patients with hepatic dysfunction, however, in patients with both hepatic dysfunction and significant renal disease, Rocephin dosage should not exceed 2 gm daily without close monitoring of serum concentrations.

Alterations in prothrombin times have occurred rarely in patients treated with Rocephin. Patients with impaired vitamin K synthesis or low vitamin K stores (e.g., chronic hepatic disease and malnutrition) may require monitoring of prothrombin time during Rocephin treatment. Vitamin K administration (10 mg weekly) may be necessary if the prothrombin time is prolonged before or during therapy.

Prolonged use of Rocephin may result in overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Rocephin should be prescribed with caution in individuals with a history of gastrointestinal disease, especially colitis.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Carcinogenesis: Considering the maximum duration of treatment and the class of the compound, carcinogenicity studies with ceftriaxone in animals have not been performed. The maximum duration of animal toxicity studies was six months.

Mutagenesis: Genetic toxicology tests included the Ames test, a micronucleus test and a test for chromosomal aberrations in human lymphocytes cultured *in vitro* with ceftriaxone. Ceftriaxone showed no potential for mutagenic activity in these studies.

Impairment of Fertility: Ceftriaxone produced no impairment of fertility when given intravenously to rats at daily doses up to 586 mg/kg/day, approximately 20 times the recommended clinical dose of 2 gm/day.

PREGNANCY: Teratogenic Effects: Pregnancy Category B. Reproductive studies have been performed in mice and rats at doses up to 20 times the usual human dose and have no evidence of embryotoxicity, fetotoxicity or teratogenicity. In primates, no embryotoxicity or teratogenicity was demonstrated at a dose approximately three times the human dose.

There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nonteratogenic Effects: In rats, in the Segment I (fertility and general reproduction) and Segment III (perinatal and postnatal) studies with intravenously administered ceftriaxone, no adverse effects were noted on various reproductive parameters during gestation and lactation, including postnatal growth, functional behavior and reproductive ability of the offspring, at doses of 586 mg/kg/day or less.

NURSING MOTHERS: Low concentrations of ceftriaxone are excreted in human milk. Caution should be exercised when Rocephin is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness of Rocephin in neonates, infants and children have been established for the dosages described in the Dosage and Administration section.

ADVERSE REACTIONS: Rocephin is generally well tolerated. In clinical trials, the following adverse reactions, which were considered to be related to Rocephin therapy or of uncertain etiology, were observed:

LOCAL REACTIONS—pain, induration or tenderness at the site of injection (1%). Less frequently reported (less than 1%) was phlebitis after IV administration.

HYPERSENSITIVITY—rash (1.7%). Less frequently reported (less than 1%) were pruritus, fever or chills.

HEMATOLOGIC—eosinophilia (6%), thrombocytosis (5.1%) and leukopenia (2.1%). Less frequently reported (less than 1%) were anemia, neutropenia, lymphopenia, thrombocytopenia and prolongation of the prothrombin time.

GASTROINTESTINAL—diarrhea (2.7%). Less frequently reported (less than 1%) were nausea or vomiting, and dysgeusia.

HEPATIC—elevations of SGOT (3.1%) or SGPT (3.3%). Less frequently reported (less than 1%) were elevations of alkaline phosphatase and bilirubin.

RENAL—elevations of the BUN (1.2%). Less frequently reported (less than 1%) were elevations of creatinine and the presence of casts in the urine.

CENTRAL NERVOUS SYSTEM—headache or dizziness were reported occasionally (less than 1%).

GENITOURINARY—moniliasis or vaginitis were reported occasionally (less than 1%).

MISCELLANEOUS—diaphoresis and flushing were reported occasionally (less than 1%).

Other rarely observed adverse reactions (less than 0.1%) include leukocytosis, lymphocytosis, monocytosis, basophilia, a decrease in the prothrombin time, jaundice, glycosuria, hematuria, bronchospasm, serum sickness, abdominal pain, colitis, flatulence, dyspepsia, palpitations and epistaxis.

DOSAGE AND ADMINISTRATION: Rocephin may be administered intravenously or intramuscularly. The usual adult daily dose is 1 to 2 gm given once a day (or in equally divided doses twice a day) depending on the type and severity of the infection. The total daily dose should not exceed 4 grams.

For the treatment of serious miscellaneous infections in children, other than meningitis, the recommended total daily dose is 50 to 75 mg/kg (not to exceed 2 grams), given in divided doses every 12 hours. Generally, Rocephin therapy should be continued for at least two days after the signs and symptoms of infection have disappeared. The usual duration is 4 to 14 days; in complicated infections longer therapy may be required.

In the treatment of meningitis, a daily dose of 100 mg/kg (not to exceed 4 grams), given in divided doses every 12 hours, should be administered with or without a loading dose of 75 mg/kg.

For the treatment of uncomplicated gonococcal infections, a single intramuscular dose of 250 mg is recommended.

For preoperative use (surgical prophylaxis), a single dose of 1 gm administered ½ to 2 hours before surgery is recommended.

When treating infections caused by *Streptococcus pyogenes*, therapy should be continued for at least ten days.

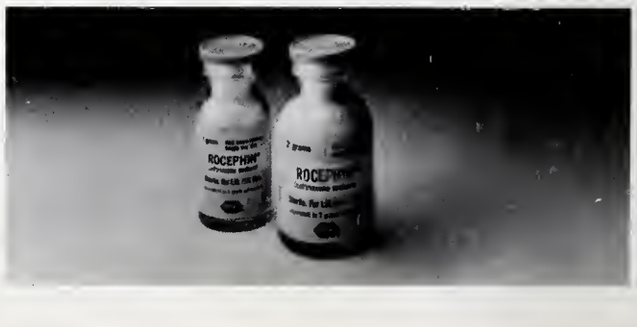
No dosage adjustment is necessary for patients with impairment of renal or hepatic function, however, blood levels should be monitored in patients with severe renal impairment (e.g., dialysis patients) and in patients with both renal and hepatic dysfunctions.

HOW SUPPLIED: Rocephin (ceftriaxone sodium/Roche) is supplied as a sterile crystalline powder in glass vials and piggyback bottles. The following packages are available:

Vials containing 250 mg equivalent of ceftriaxone: Boxes of 10 (NDC 0004-1962-01).
Vials containing 500 mg equivalent of ceftriaxone: Boxes of 10 (NDC 0004-1963-01).
Vials containing 1 gm equivalent of ceftriaxone: Boxes of 10 (NDC 0004-1964-01).
Piggyback bottles containing 1 gm equivalent of ceftriaxone: Boxes of 10 (NDC 0004-1964-03).
Vials containing 2 gm equivalent of ceftriaxone: Boxes of 10 (NDC 0004-1965-01).
Piggyback bottles containing 2 gm equivalent of ceftriaxone: Boxes of 10 (NDC 0004-1965-03).
Bulk pharmacy containers, containing 10 gm equivalent of ceftriaxone: Boxes of 1 (NDC 0004-1971-01).
NOT FOR DIRECT ADMINISTRATION.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ROCHE®



References:

1. Data on file, Hoffmann-La Roche Inc.
2. Patel IH, Kaplan SA: *Am J Med* 77:17-25, Oct 19, 1984.
3. Richards DM, *et al*: *Drugs* 27:469-527, 1984.
4. Cleeland R, Squires E: *Am J Med* 77:3-11, Oct 19, 1984.
5. Tanner DJ, Nazarian MQ: *Am J Med* 77:104-111, Oct 19, 1984.

riety of positions since 1963, most recently as chief of the Gene Regulation Section.

JOHN P. McGOVERN, MD, Houston, received the first honorary doctorate awarded by Pan American University in Edinburg, Tex. Dr McGovern is the founder of the McGovern Allergy Clinic, president of the John P. McGovern Foundation, and chairman of the Texas Allergy Research Foundation.

TRACY E. STREVEY, JR, MC, FACPE, major general, US Army, and commanding general, headquarters, US Army Health Service Command, Fort Sam Houston, was awarded fellowship in the American College of Physician Executives.

A statewide commission to study the development of successful community-based programs for care of the mentally ill has been formed by the Hogg Foundation for Mental Health at The University of Texas. Among the Texans appointed to the commission are RONALD J. ANDERSON, MD, president and chief executive officer, Parkland Hospital, Dallas; CERVANDO MARTINEZ, MD, professor of psychiatry, The University of Texas Health Science Center at San Antonio; GARY E. MILLER, MD, commissioner, Texas Department of MHMR, Austin; DOUGLAS PURYEAR, MD, associate professor of psychiatry, The University of Texas Health Science Center at Dallas; and MARGARET SEDBERRY, MD, state agency medical consultant, Texas Rehabilitation Commission, Austin.

WILLIAM F. ROSS, MD, Dallas, has been appointed member-at-large of the Executive Committee of the American Board of Family Practice.

DONALD W. PATRICK, MD, Pflugerville, has been chosen president-elect of the Texas Association of Neurologic Surgeons.

CHARLES A. LeMAISTRE, MD, president of The University of Texas System Cancer Center, has received the 1987 President's Award from the American Lung Association for his many years of courageous effort to alert the public and scientific community about the dangers of smoking.

Taking Giant Steps.

The smallest step can be a milestone... the simplest task, a major accomplishment. For individuals suffering from a physical disability, the day-to-day tasks we all take for granted can be major obstacles to independence and mobility.

At **Dallas Rehabilitation Institute (DRI)**, our team of physicians, therapists and nurses can plan an individualized treatment program to help your patient regain as much function and independence as possible. With the most modern facilities and equipment, and therapists who are rehabilitation specialists, we offer a unique approach to rehabilitation.

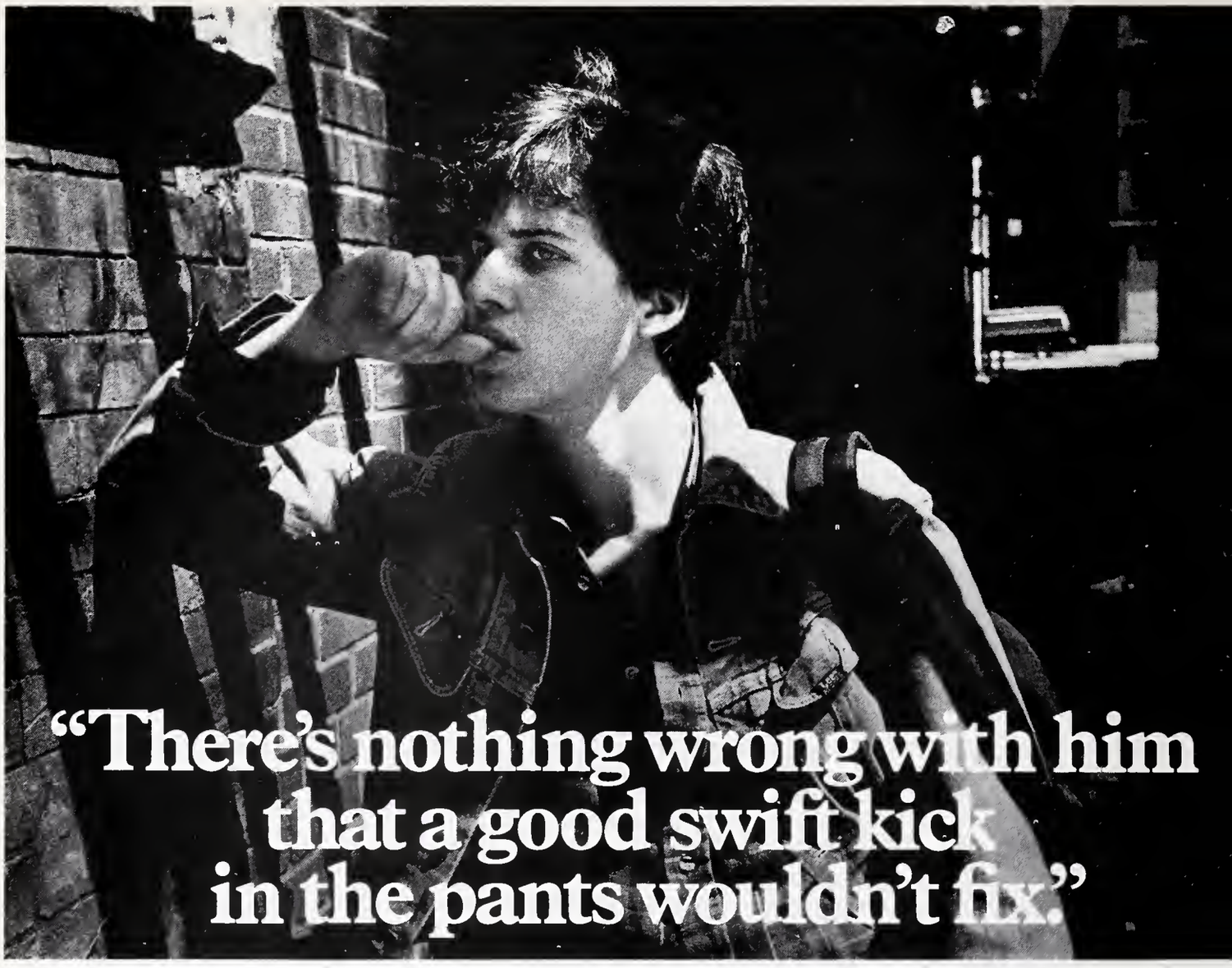
Our comprehensive rehabilitation programs include:

- **spinal cord injury**
- **head injury**
- **stroke**
- **arthritis**
- **amputee**
- **spinal pain**

Call us to arrange a private tour of our facilities or to receive more information on the disease category rehabilitation programs offered at DRI.

DRI

9713 Harry Hines Blvd.
Dallas, TX 75220-5441
(214) 358-6000
1-800-441-9199 (TX only)



Sometimes confusing or inappropriate behavior such as a bad attitude, laziness, or extreme immaturity, can be a warning sign of something more serious. A mental illness. Mental illness is a medical illness—not a personal weakness.

Learn to recognize these important warning signs. It can be the first step to healing the sickness.

- Marked personality change over time.
- Confused thinking; strange or grandiose ideas.
- Prolonged severe depression; apathy; or extreme highs and lows.
- Excessive anxieties, fears or suspiciousness; blaming others.
- Withdrawal from society, friendlessness; abnormal self-centeredness.
- Denial of obvious problems; strong resistance to help.
- Thinking or talking about suicide.
- Numerous, unexplained physical ailments; marked changes in eating or sleeping patterns.
- Anger or hostility out of proportion to the situation.
- Delusions, hallucinations, hearing voices.
- Abuse of alcohol or drugs.
- Growing inability to cope with problems and daily activities such as school, job, or personal needs.

For an informative booklet, write: The American Mental Health Fund, P.O. Box 17700, Washington, D.C. 20041. Or call toll free: 1-800-433-5959.

Learn to see the sickness. Learning is the key to healing.

THE AMERICAN MENTAL HEALTH FUND

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

JUST ARRIVED:

1987 325 Convertible

The first BMW Convertible offered in over three decades. Its 168-h.p. engine has 39% more power than 1986 3-series.

JUST ARRIVED:

1987 7-Series

An entirely new luxury sedan for 1987. From its aerodynamic exterior to its hand-sewn leather interior, this car's impact will be measured in decades, not years.

JUST ARRIVED:

1987 M-Series

The three new M-Series BMW's represent the two fastest production sedans available in the U.S., (M3 and M5), and a limited edition sports coupe (M6) with such features as a hand built 256-h.p. engine and hand tuned suspension.

Over 150 new BMW's to choose from. All with ABS brakes and 3 year/36,000 mile warranty.

The New BMW

BMW CENTER

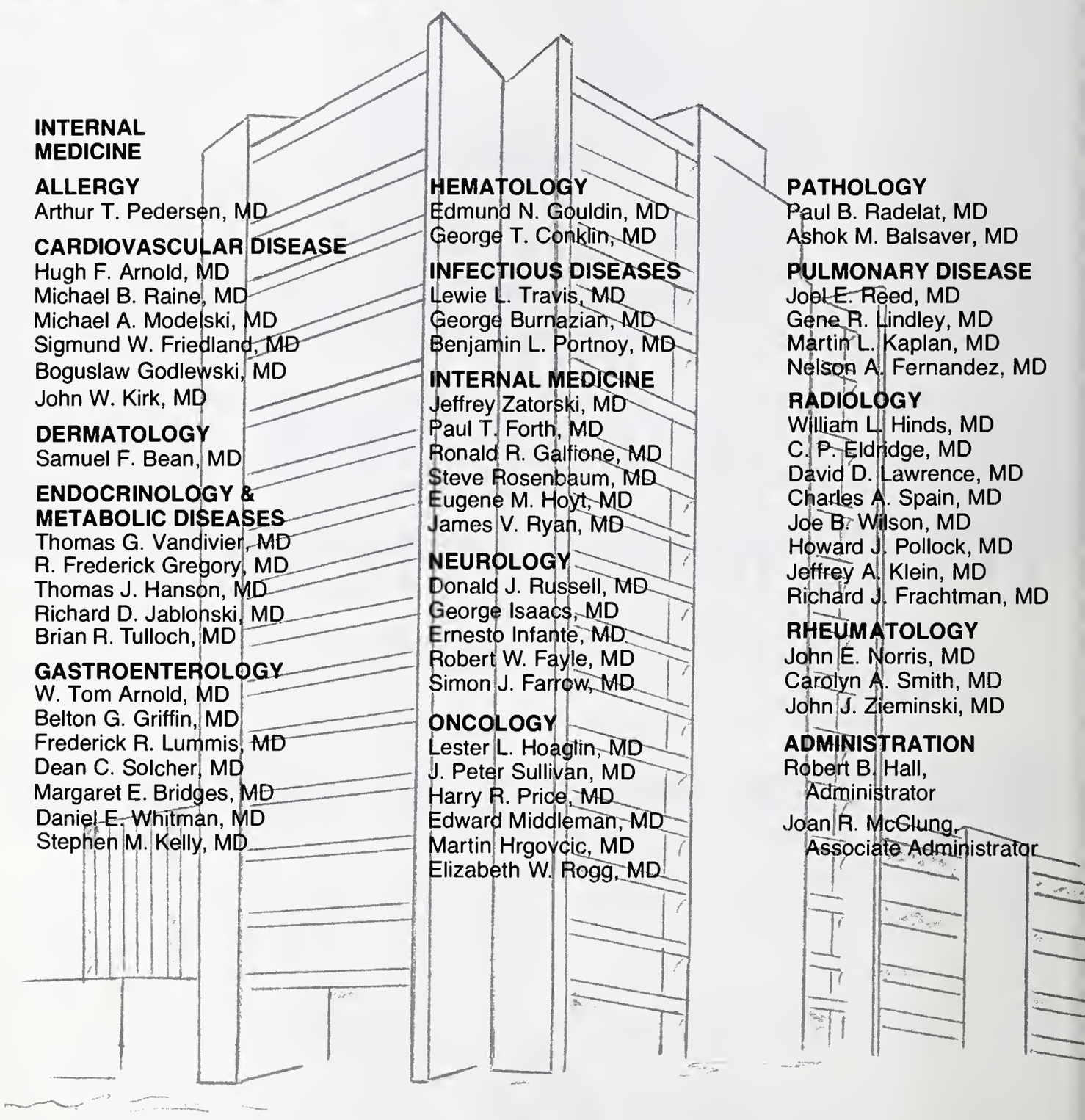
FACTORY AUTHORIZED.
4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH



INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD
John W. Kirk, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Daniel E. Whitman, MD
Stephen M. Kelly, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
Eugene M. Hoyt, MD
James V. Ryan, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the origina hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. S685

1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med,* 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

knoll®

© 1986, BASF K&F Corporation 5768/9-86 Printed in U.S.A.

vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

American Physicians Insurance Exchange

MALPRACTICE

It's an allegation that can happen to anyone.

You don't have to stand alone!

We wrote the book on malpractice insurance. We started writing professional liability insurance over 12 years ago, when the other insurance companies were looking for a way out.

Why? Because we're 100% owned and controlled by dentists and physicians. We know you can't operate your practice without malpractice insurance.

We know a good insurance company must insure *all* specialties. And we have never settled a claim without an insured's written consent. We believe that you shouldn't have to stand alone. If you're concerned about your insurance company's commitment to you, give us a call today.

api

1301 Capital of Texas Highway, Suite #B-300
Austin, Texas 78746
(512) 328-1520

Nationwide 1-800-252-3628

In San Antonio:
Bill Sweet
(512) 497-3205

RANDALL B. MEACHAM, MD

JAMES M. LIBBY, MD

DONALD P. GRIFFITH, MD

New techniques for the elimination of upper tract urinary stones

Randall B. Meacham, MD; James M. Libby, MD; Donald P. Griffith, MD, Scott Department of Urology, Baylor College of Medicine, The Methodist Hospital, and the Litho Center Houston. Send reprint requests to Dr Griffith, 6560 Fannin, Suite 1019, Houston, TX 77030.

Technological advances have yielded less invasive approaches to many diseases previously amenable only to open surgical procedures. Among the fastest changing areas of surgical practice is the treatment of upper tract urinary stones. Recent developments in endoscopy and acoustical physics have led to minimally invasive methods for the destruction of renal and upper ureteral stones that traditionally required open surgical removal. The techniques of percutaneous nephroscopy, transurethral ureteroscopy, ultrasonic lithotripsy, electrohydraulic lithotripsy, and extracorporeal shock wave lithotripsy have replaced traditional surgical lithotomy in most cases of problematic renal and ureteral stones.

Although surgical treatment of renal disease dates from the 16th century, elective lithotomy for upper ureteral and renal stones became accepted practice only within the past 100 years, for it was not until 1880 that Sir Henry Morris performed the first successful lithotomy on an otherwise normal kidney (1).

Percutaneous removal of a renal stone was first described by Rupel and Brown in 1941 (2). Similar cases were reported by Goodwin in 1955 (3) and by Bissada in 1974 (4). The technique, however, received little attention until 1982, when Alken described a technique for percutaneous ultrasonic pulverization of renal calculi (5). Since 1982, major advances in flexible and rigid endoscopy have made it practical to visualize all segments of the pyelocaliceal system and ureter (Figs 1a,1b). Initially, stones were removed with baskets or grasping forceps. Though still useful for small stones, plucking techniques were ill-suited for removal of large or impacted stones. Ultrasonic and electrohydraulic lithotripsy, which can be utilized via both nephroscopes and ureteroscopes, however, have made it possible to pulverize and eliminate stones of all sizes anywhere in the urinary tract.

ULTRASONIC LITHOTRIPSY (UL)

Ultrasonic lithotripsy is analogous to a miniature jackhammer. High-frequency vibrations (approximately 20 Hz) from a piezoelectric source are transmitted into a hollow, stainless steel probe, 1 to 3 mm in diameter. The tip of the probe (Fig 2a) vibrates to and fro with an amplitude of several millimicrons at a frequency identical to that of the energized ceramic.

When the vibrating probe is brought into contact with a stone (under direct vision), the stone fragments. Stone fragments are typically removed by vacuum aspiration through the probe or with grasping forceps. Though this technique is effective with stones of all sizes, it is more effective with soft than with hard stones. It is equally effective for stones in the kidney or ureter.

ELECTROHYDRAULIC LITHOTRIPSY (EHL)

Electrohydraulic lithotripsy is analogous to a miniature water hammer. A 2 to 4 mm diameter, flexible, coaxial electronic probe (Fig 3) is used via an endoscope. An electrical potential is created between the coaxial electrodes with an electronic capacitor. When the capacitor is discharged, a spark is generated between the electrodes. The spark vaporizes a few microliters of water, thereby creating a cavitation bubble adjacent to the tip of the electrode (Fig 2b). The cavitation bubble compresses adjacent water molecules, thereby creating a pressure wave or water hammer. In its urologic application, the electrode is positioned through the endoscope 1 to 2 mm from the urinary stone; visual contact with the probe and stone is maintained at all times. Detonation of the electrode creates a hydraulic pressure wave that is more powerful than the ultrasonic jackhammer. Large and hard stones can be effectively fragmented with this technique. Stone fragments are removed with vacuum aspiration through the endoscope or with grasping forceps. This technique is applicable for stones in the kidney. Its usefulness for stones in the ureter has not been clearly defined.

PERCUTANEOUS LITHOTRIPSY (PCL)

Stones in the kidney and upper ureter may be removed via a percutaneous puncture into the renal pelvis. Typically, the procedure is performed in two stages.

In most cases the percutaneous nephrostomy is made with local anesthesia under fluoroscopic control. A 22-gauge needle is placed into the patient's flank just below the 12th rib at the level of the posterior axillary line. The needle is directed toward a posterior calix. A flexible tip guidewire is then passed through the needle into the calix, infundibulum, renal pelvis, and down the ureter (Fig 4). The nephrostomy tract may be dilated with minimal trauma using sequentially larger catheters or balloon dilators (Fig 5).

Stone removal and/or fragmentation and removal is usually performed as a second stage under local, regional, or more typically, general anesthesia and with C-arm fluoroscopic control. The nephrostomy tract is dilated to 10 mm with a Grunzig type of balloon catheter. Thereafter, a nephroscope may be atraumatically passed over the guidewire into the renal pelvis (Fig 6). All types of forceps, baskets, and lithotripsy instruments may be used with rigid endoscopes. Flexible nephroscopes are useful for visualizing and retrieving stones in remote calices and in the midureter. A nephrostomy catheter is typi-

This article has been named a recipient of the Harriet Cunningham Citation for Meritorious Scientific Writing. The award, named in memory of a longtime managing editor of *Texas Medicine*, recognizes review articles of exceptional scientific quality published in the journal.

cally left indwelling for several days postoperatively.

Percutaneous stone removal offers many advantages over traditional surgical lithotomy. It may be performed on outpatients. More typically, however, hospital confinement averages two to three days as compared with five to seven days of confinement after open lithotomy. Wound pain and analgesic use are notably less with percutaneous procedures as is postoperative convalescence. Most patients return to work within a week. Anatomical abnormalities such as strictures or stenoses may also be corrected by endoscopic incision or dilatation.

The disadvantages and limitations of percutaneous stone removal focus on patient selection and on the skill of the operative team. Some stones and some patients are better candidates than others. For example, single stones in a capacious renal pelvis in a thin patient are ideally suited, whereas an obese patient with multiple caliceal stones in a kidney with distorted renal anatomy is a poor candidate. Considerable skill also is required for proper nephrostomy placement and for optimum use of all of the available technological modalities. Incomplete stone removal, traumatic injury to the renal collecting system, intraoperative hemorrhage, and postoperative infection are the primary complications and thereby the disadvantages of these techniques. Minor complications and/or hemorrhage requiring transfusion occur in about 5% of cases. Major complications are even less frequent. Untoward effects of the ultrasonic jackhammer or electrohydraulic water hammer are virtually unknown. Percutaneous procedures successfully remove the targeted stone(s) in more than 95% of cases. In complex or multiple stone cases, however, a significant percentage of patients will require secondary or tertiary procedures and/or carry residual stone fragments. However, when percutaneous procedures are undertaken by a skilled team, the complications are fewer and the results are better than those associated with traditional surgical lithotomy.

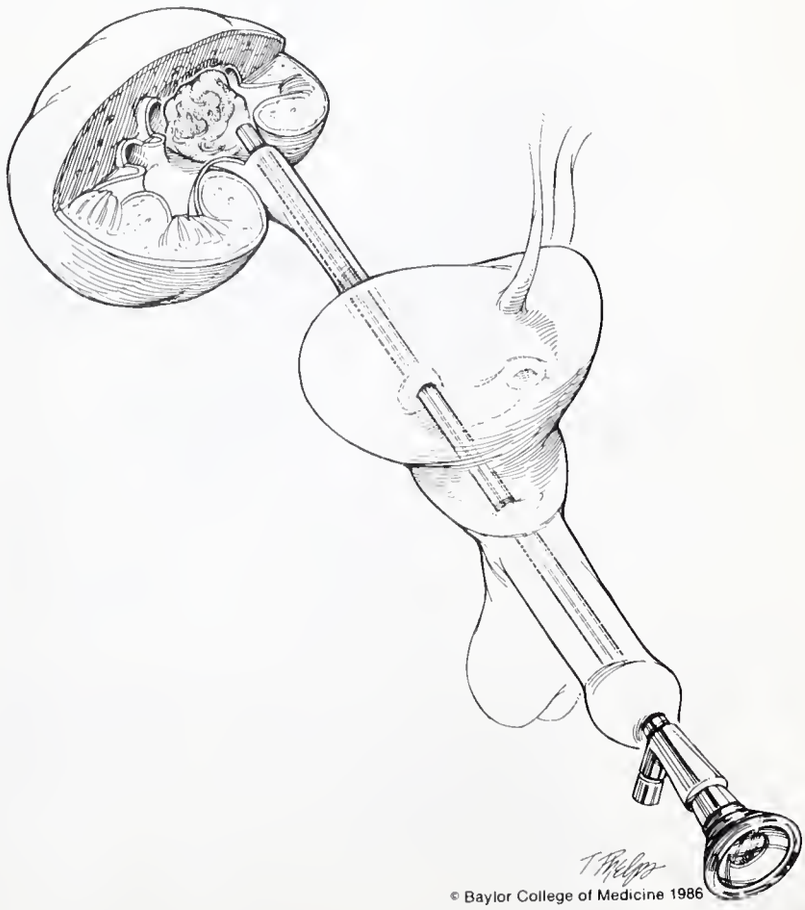
TRANSURETHRAL URETEROSCOPIC LITHOTRIPSY

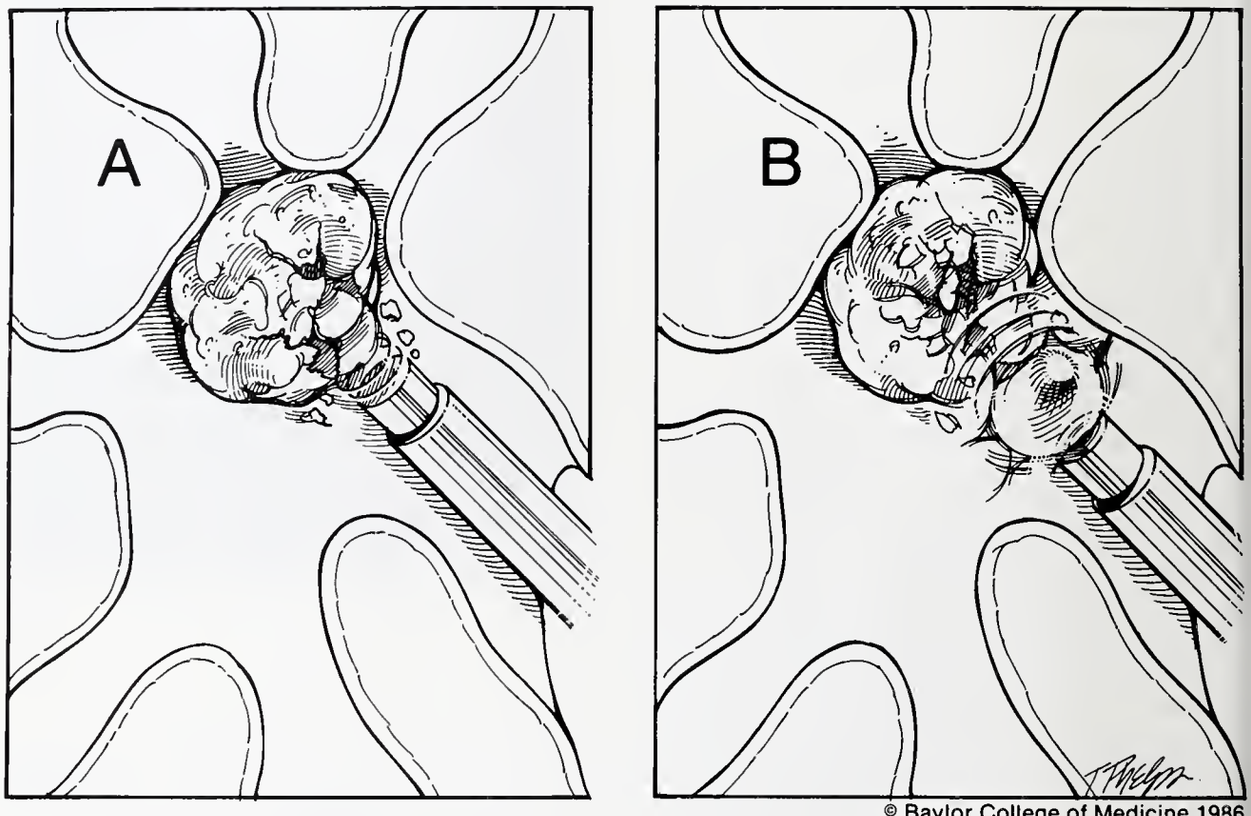
Stones in the mid- and distal ureter are candidates for removal using transurethral ureteroscopic lithotripsy (TUUL). FDA-approved flexible and rigid ureteroscopes are commercially available; the optics and manipulative features of the rigid instruments are currently superior to those of the flexible instruments. Both instruments may be introduced into the ureters via the urethra following cystoscopic dilatation of the intramural ureter. In many (but not all) patients the scopes may be passed to the renal pelvis (Fig 1a). Baskets, grasping forceps, electrohydraulic electrodes, and ultrasound probes may be used with the rigid instruments to retrieve or pulverize stones.

Internal indwelling silicone ureteral stents (Fig 7)

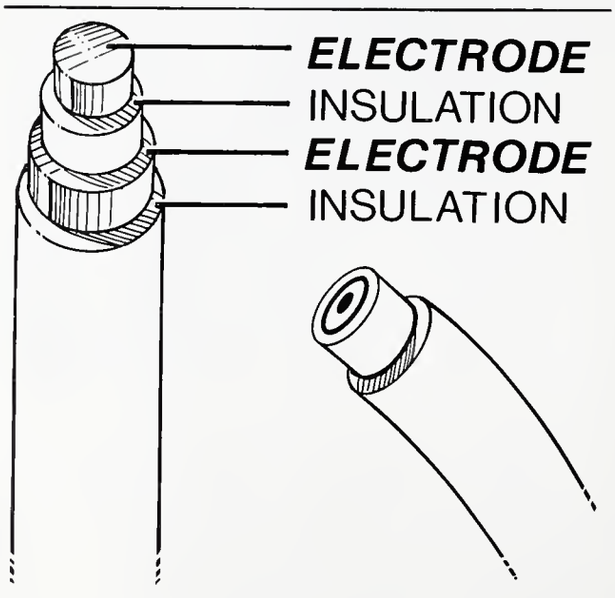
1a. Rigid ureteroscope passed transurethrally up ureter to renal pelvis.

1b. Schematic of rigid ureteroscope passed transurethrally up ureter to renal pelvis.





2a. A 3-mm, hollow ultrasonic probe pulverizing a stone by contact fragmentation; b. An electrohydraulic cavitation bubble generates a shock or pressure wave.



3. A 3-mm, coaxial electrohydraulic probe. A spark is generated between the inner and outer electrodes by a capacitor.

facilitate ureteral endoscopy and spontaneous elimination of stone particles. Stents are analogous to orthopedic braces because like plaster casts, stents put the organ (ureter) to rest. Silicone stents are pliable and nonreactive; they dilate the ureter and minimize ureteral spasm and edema. Small stone particles pass around the stent whereas urine flows into and down the stent. Stents may be placed endoscopically either before or concurrent with other operative procedures to minimize ureteral trauma.

Extracorporeal shock wave lithotripsy (ESWL)

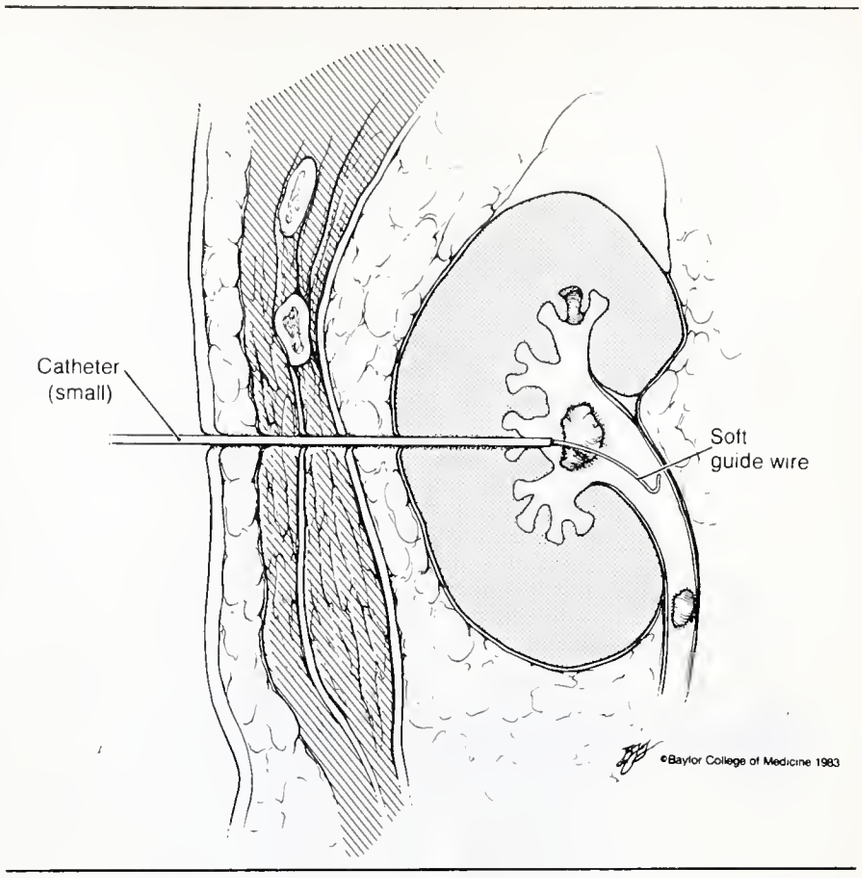
In February of 1980, which was 100 years after the first successful nephrolithotomy, Chaussy and associates noninvasively pulverized an in situ urinary stone in a human by using shock waves generated outside of the body; the patient subsequently passed sand-sized particles spontaneously per urethra (6).

ACOUSTICAL PHYSICS

Pioneering development of the lithotriptor resulted from collaborative investigations of Dornier Systems, GmbH—a West German aerospace company—and urologists.

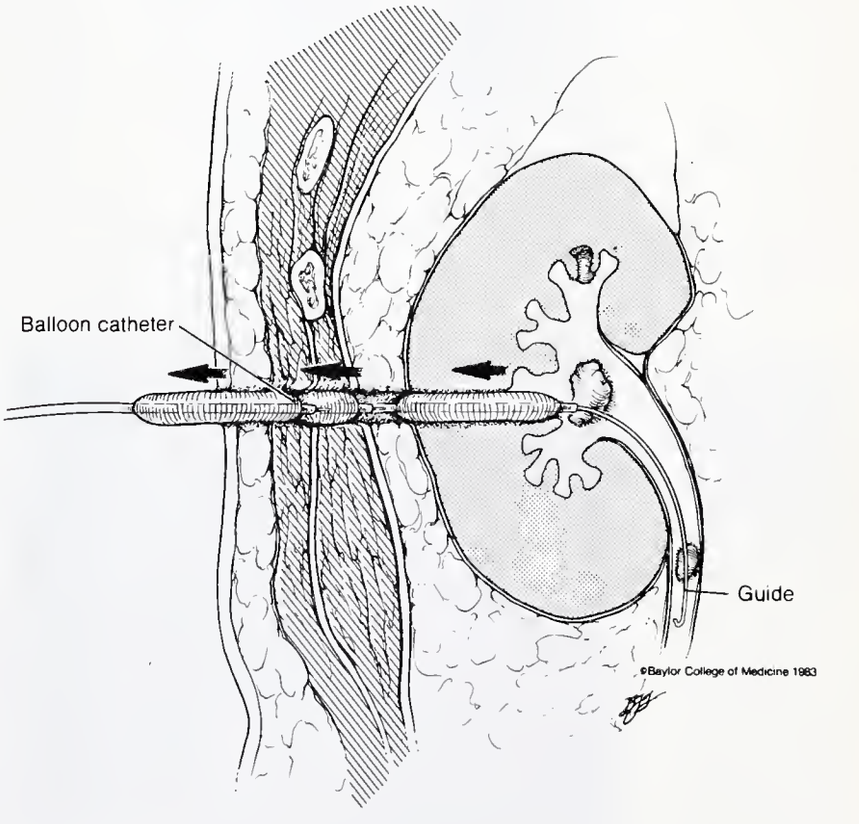
Shock waves are equivalent to the water hammer hydraulic pressure waves previously characterized, except that they are generated extracorporeally, they are focused, and they are several orders of

4. Percutaneous nephrostomy (PCN).



magnitude more powerful than the pressures generated by the electrohydraulic electrodes described earlier. Shock waves, like sound waves, behave according to the physical laws of acoustics. Sound and shock waves travel through a given medium with no change in impedance. However, when the waves enter a different medium, wave propagation may accelerate or decelerate, depending upon the density of the new medium; the impedance of the energy also changes.

Shock waves utilized to pulverize in situ urinary stones are generated in water by a bipolar electrode. High voltage (18 to 24 kv) is used to detonate a spark in less than a microsecond. The spark vaporizes several milliliters of water. The cavitation bubble thus formed creates pressure on adjacent water molecules. The pressure is transmitted much like falling dominoes; thus, a pressure, shock, or water hammer wave is created. The waves are focused with an elliptical reflector (Fig 8). Human tissues have a density essentially equivalent to water, so when the patient is immersed in water along with the shock wave generator, there is no change in impedance (energy) as the pressure wave passes through biologic tissue. The pressure of the wave at the focal point is approximately 800 atmospheres (11,000 psi). Traveling faster than the speed of sound, the passing wave accelerates as it enters the stone because stone is more dense than water. This change in impedance creates "shear and tear" forces within the stone that cause the stone to implode (ie, it crumbles). The stone does not explode. In most cases, sand-size particles are produced (Fig 9). ESWL fragments all types of crystalline urinary stones, though some stones pulverize more completely than others.



5. Balloon dilatation of percutaneous nephrostomy tract (maximum diameter = 10 mm).

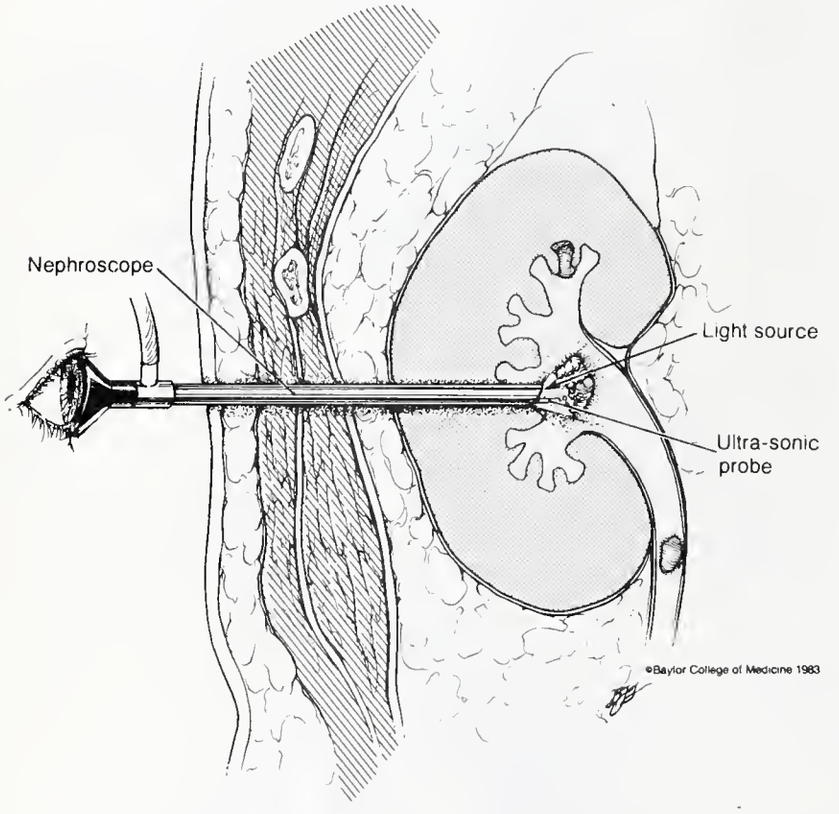
TISSUE TRAUMA

Shock waves cause no damage to replicating cells in tissue cultures. Shock waves several times more powerful than those used clinically have not caused immediate or delayed damage to kidneys, abdominal organs, or bones of experimental animals. Only when shock waves were targeted on the lungs of animals did any significant damage occur; in these instances, pulmonary hemorrhage and death occurred. This trauma resulted from the numerous, fragile air-fluid interfaces present in pulmonary tissue. As of May, 1986, more than 100,000 patients world-wide had been treated with the Dornier lithotripter. Reports of organ or tissue damage from this experience have been confined to less than 50 cases of perirenal hematoma and a few cases of mild, reversible pancreatitis.

PATIENT SELECTION

Some stones and some patients are better candidates than others. Small stones, soft stones, and

6. Nephroscope passed percutaneously into renal pelvis



7. Internal ureteral stent. Urine draws through the perforated stent. A pullout suture attached to the distal end of the stent that exits the urethral meatus may be used to remove the stent.

opaque stones are better candidates than large, hard, and/or radiolucent stones. Stones that are impacted in the collecting system (ie, ureter or infundibuli) pulverize less readily than floating stones because there is scant fluid around the impacted stone to transmit the shock wave. Cystine stones are malleable. Because of this property, they shatter less readily than other types. Densely opaque stones, regardless of composition, are predictably hard; such stones commonly require more than one ESWL treatment to effect adequate pulverization. Stones in diverticuli usually pulverize satisfactorily, but elimination of the particles is problematic because of the absence of peristalsis and the associated stasis. Stones shadowed by the skeleton (ie, stones overlying by ribs, vertebrae, pelvis, or sacrum) pulverize somewhat less readily because of energy diffusion by the overshadowing bone. Parenchymal stones (ie, nephrocalcinosis) are not likely to benefit from ESWL.

Patients whose weight exceeds 300 pounds may not "fit" into the lithotripter. Infants and some scoliotic patients likewise may present positioning problems. Complex anatomical candidates are typically simulated in the lithotripter preoperatively to evaluate the feasibility of stone localization.

Immersion in the water bath increases central blood volume approximately 30%. Because of this, patients with congestive heart failure, angina, or cardiac arrhythmia, require detailed evaluation. Urinary infection warrants treatment with antimicrobials before and after ESWL.

In most instances, renal and ureteral stones and/or bilateral stones are treated concomitantly. Complex cases involving large or dense stones and/or anomalous urinary drainage warrant special consideration; in a significant number of patients, ESWL may not be the preferred method of primary treatment.

ESWL TREATMENT

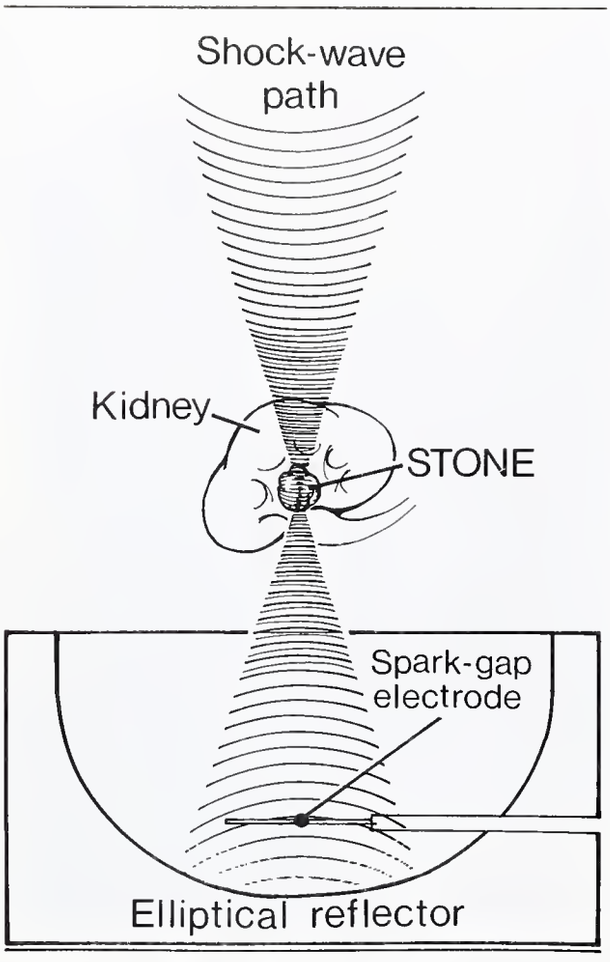
A medical history and physical examination are performed to identify coexistent medical problems. Anticoagulants and antiplatelet drugs such as aspirin, Motrin, Persantine, and Indocin are discontinued a week or more preoperatively, when possible, to minimize the risk of perirenal hematoma. Radiographs and laboratory studies that are appropriate to evaluate the particular patient for an anesthetic and an operative procedure complete the preoperative assessment. Pregnant females are not candidates inasmuch as the effects of ESWL on the fetus are unknown. Exhaustive evaluations of renal function, liver function, etc, are not warranted by the treatment because controlled clinical trials have found that ESWL does not significantly alter such parameters (7).

ESWL is performed in both inpatients and out-

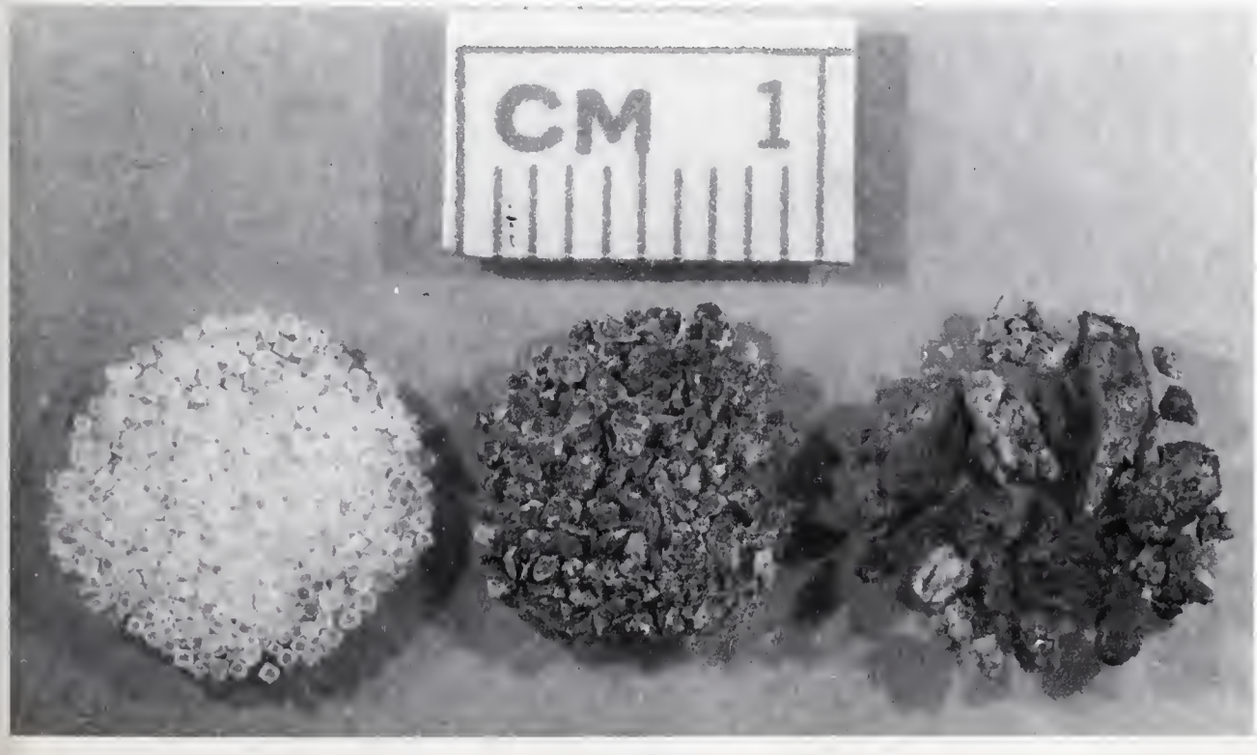
patients. A general or regional anesthetic is administered because ESWL creates a disagreeable bruising sensation; the patient must also be completely immobile during treatment. The anesthetized patient is supported by an overhead support platform (Fig 10) and is hydraulically positioned in a water bath containing two biaxial fluoroscopic monitors and the shock wave generator (Fig 11). The patient is repeatedly repositioned during ESWL to ensure that the target stone(s) are at the proper focal point to effect maximal pulverization. A typical treatment consists of 800 to 2,000 shock wave pulses. Triggering of the shock waves is electronically coupled to the patient's electrocardiographic monitor; pulse discharges are triggered by the patient's R-wave at a time when the heart is depolarized, thereby minimizing the risk of cardiac arrhythmias.

Following ESWL, patients convalesce several hours in the recovery room. Depending upon clinical circumstances, patients may be discharged for outpatient convalescence or admitted to the hospital for one or more days of observation.

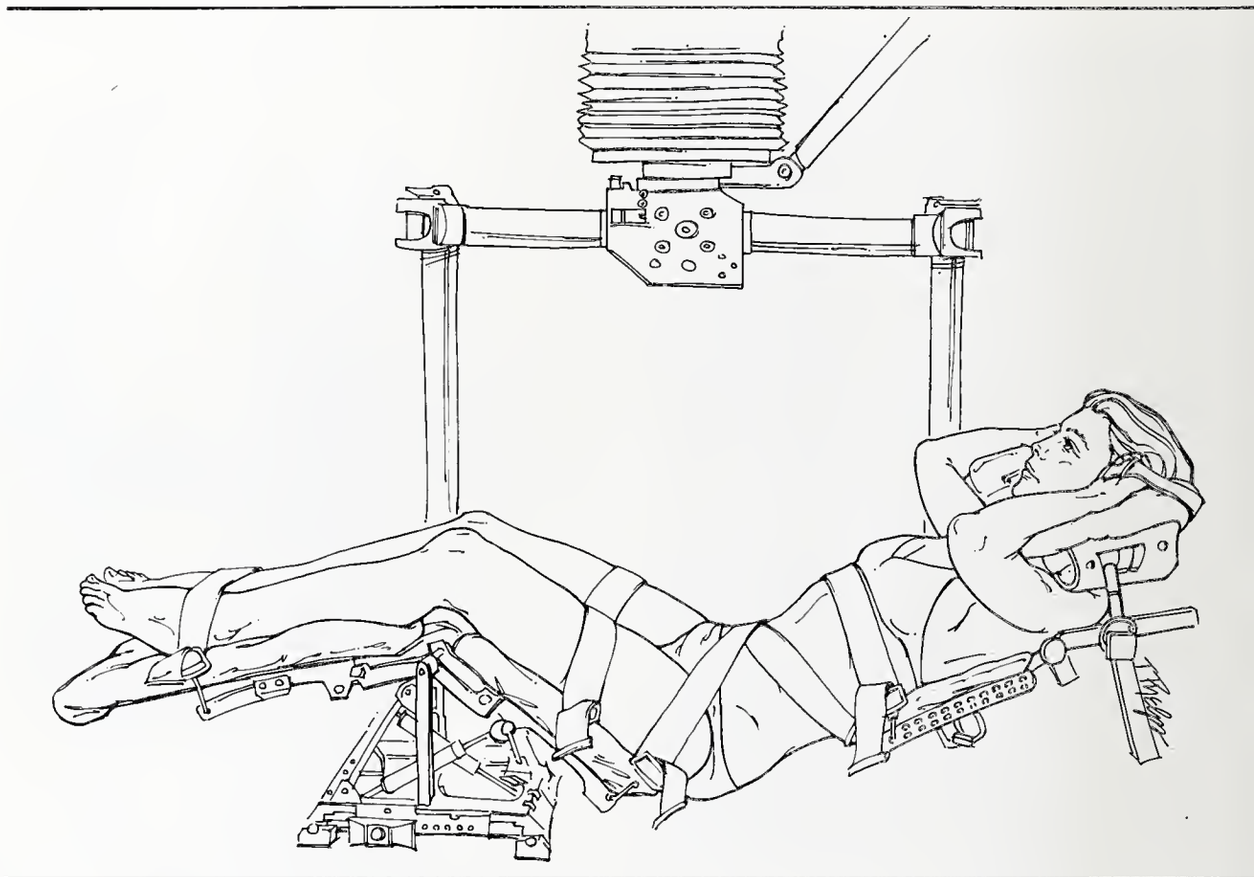
ESWL particles typically begin to pass down the ureter during treatment. Particles may pass intermittently for weeks. Approximately 40% of patients experience no colic with particle elimination. Another 30% to 40% of patients require mild oral analgesics, whereas about 15% require repeated doses of parenteral narcotics for colic.



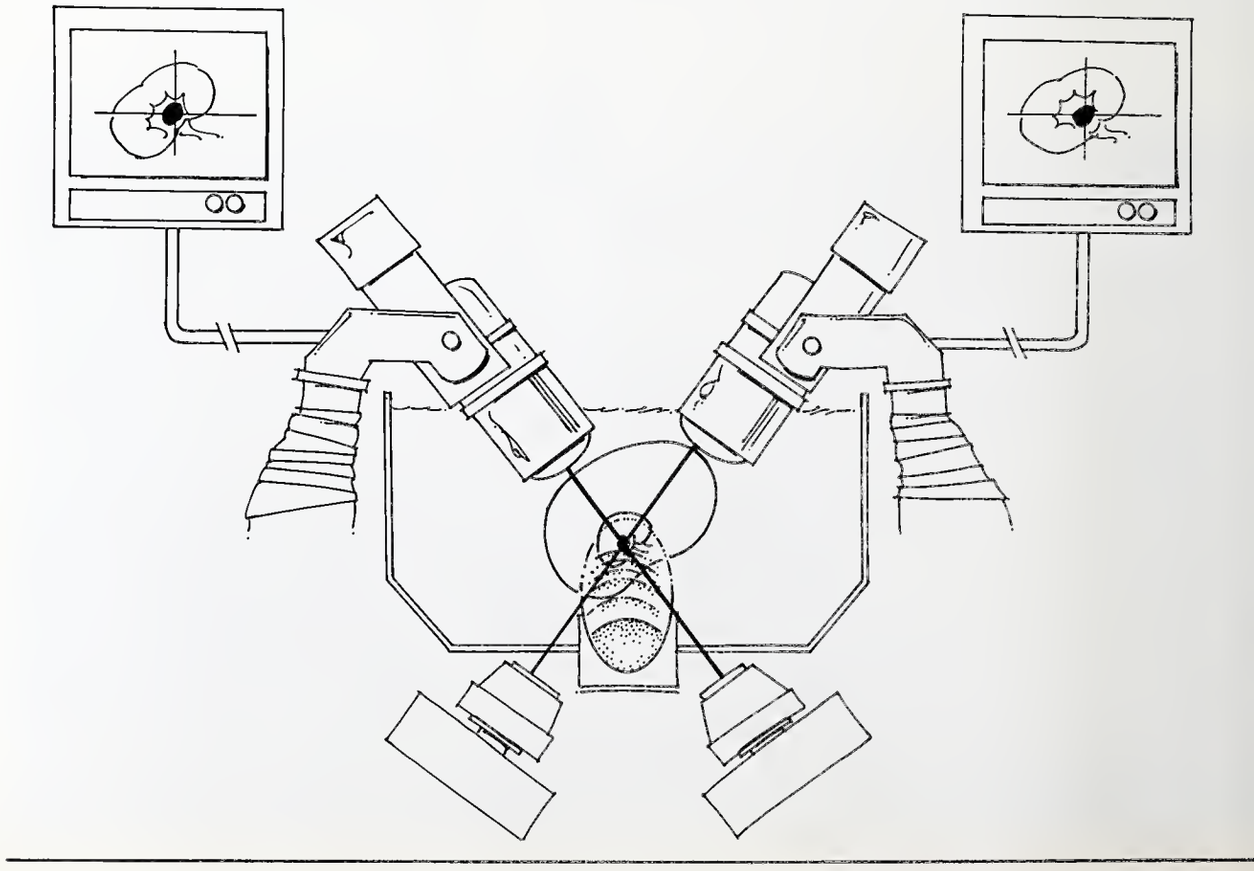
8. ESWL shock wave generator.



9. Salt (left) compared to stone particles produced by ESWL. Particles passed spontaneously.



10. ESWL support platform (drawing courtesy of Dornier Medical Systems).



11. Cross section of ESWL water bath (drawing courtesy of Dornier Medical Systems).

COMPLICATIONS

Ureteral colic and obstruction are the primary complications. A steinstrasse (stone street) is a virtual cast of the ureter filled by sand-sized particles (Fig 12). When ureteral obstruction is asymptomatic and only moderately severe, an observant approach is appropriate; most particles pass spontaneously within two to three weeks. When fever, severe colic, and/or renal shutdown occur, auxiliary procedures such as percutaneous nephrostomy and/or transurethral ureteroscopic lithotripsy are warranted.

Multiple ESWL procedures are needed to effect adequate pulverization in approximately 10% of cases. Not surprisingly, the incidence of multiple ESWL procedures (Fig 13) and auxiliary procedures (Fig 14) is directly proportional to the burden of stone treated.

Cystoscopic placement of silicone ureteral stents concomitant with ESWL facilitates ureteral dilatation and painless elimination of particles. Stents also reduce the incidence of secondary operative procedures (Fig 15).

12. Steinstrasse *(German for stone street), ie, ureter filled with sand-size stone particles following ESWL.*

RESULTS

Ninety-five percent to 98% of patients realize stone fragmentation. The failures result from impacted stones, cystine stones, and the occasional unusually hard stone. However, a stone-free result (after multiple treatments) three months or more following the last treatment inversely parallels the burden of original stone (Fig 16). Whereas concomitant use of ureteral stents minimizes patient morbidity, stents do not advance stone-free efficacy.

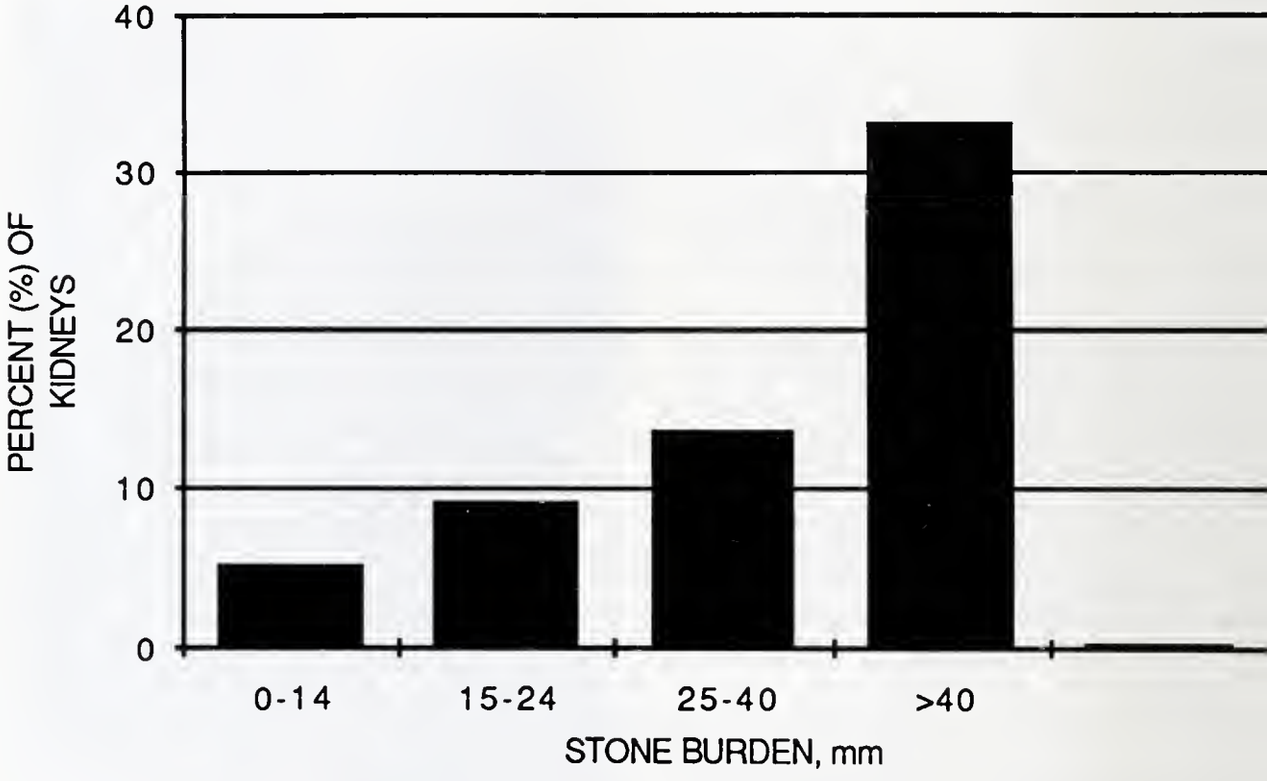
Residual stone particles almost invariably accumulate in gravity-dependent inferior calices. Postural drainage in a head-down position coupled with a brisk diuresis has, in many instances, enhanced elimination of residual particles.

Patient management

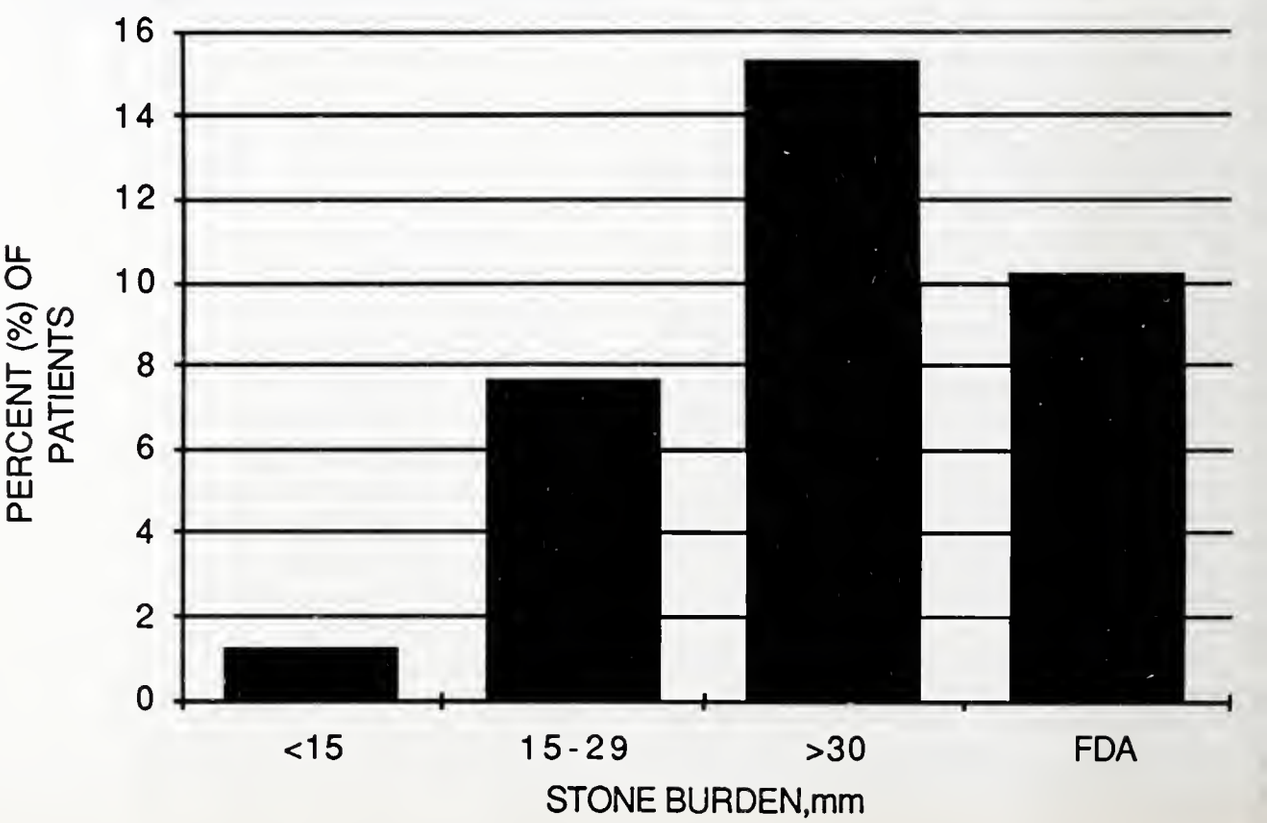
These new techniques have markedly increased the efficacy and decreased the morbidity of eliminating stones from the upper urinary tract. However, the new technologies are not a panacea. Patient selection and education are of paramount importance. Some stones and some patients do not warrant stone removal. One technique may be appropriate for one patient, whereas another technique may be more appropriate for another patient. Large or complex stones may require a combination of approaches.

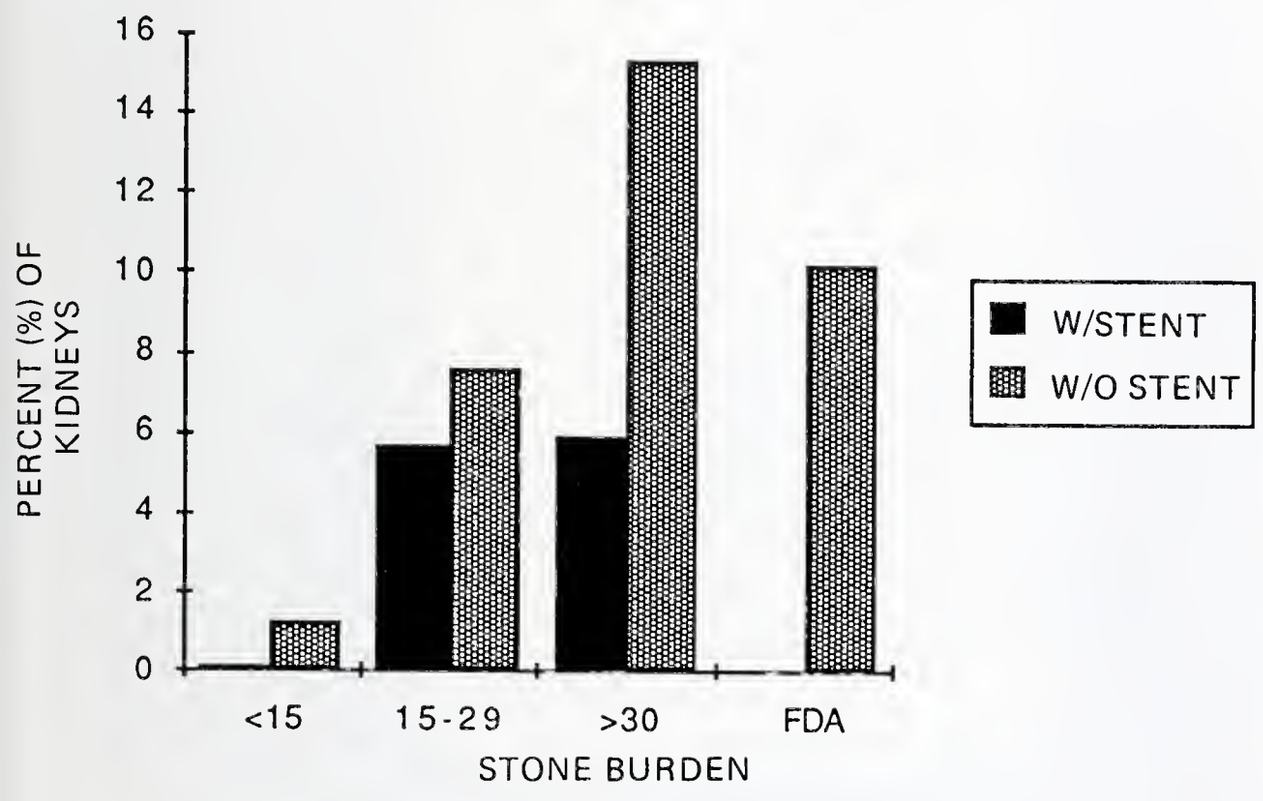
Common to all, however, is a need for extensive patient education. The public media have given considerable attention to the new technologies and have highlighted the advantages of each. Patient expectations often are unrealistic. Each patient needs enlightenment regarding the advantages, disadvan-

13. Stone burden (aggregate linear dimension of all stones/kidney on preoperative radiograph) versus incidence of repeat ESWL procedures (N = 1,653).

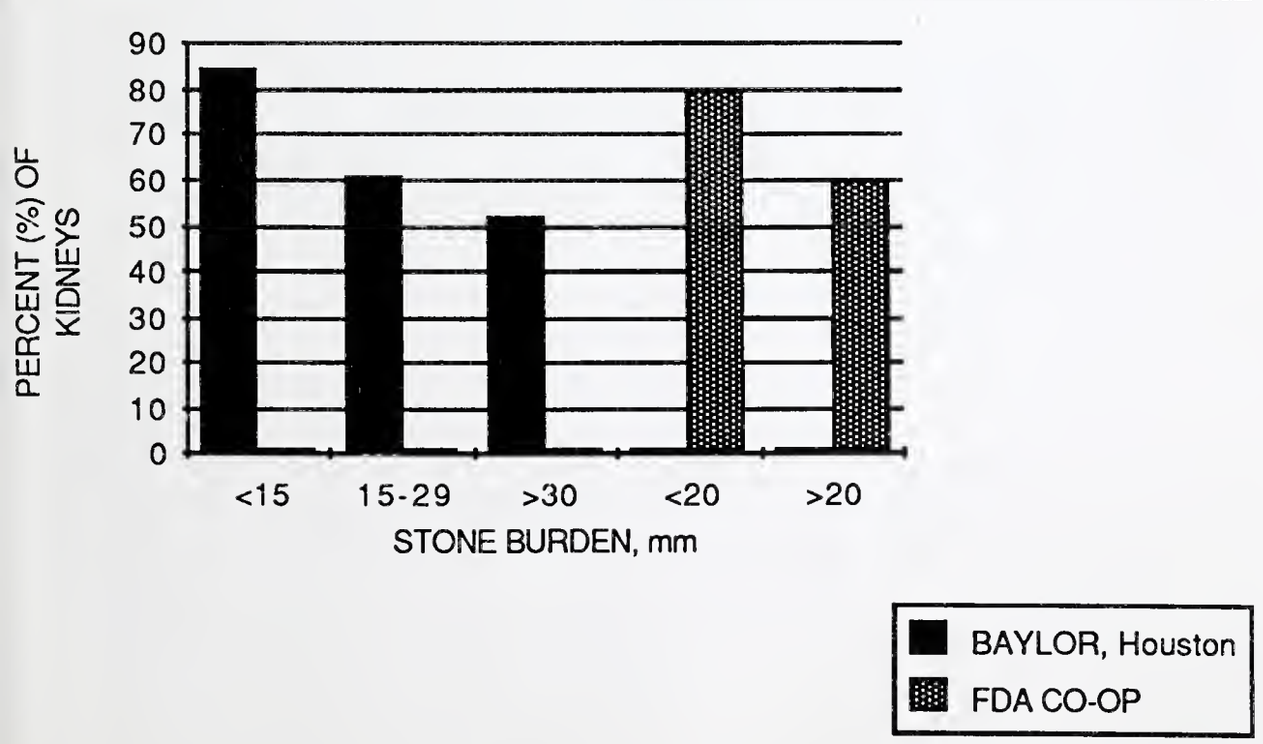


14. Stone burden (aggregate linear dimension of all stones/kidney on preoperative radiograph) versus incidence of adjunctive procedures consisting of percutaneous nephrostomy, ureteroscopic manipulation, and surgical lithotomy. The Baylor group is compared with the FDA Cooperative Study Group (7).





15. Stone burden (aggregate linear dimension of all stones/kidney on preoperative radiograph) versus incidence of auxiliary operations in patients with and without ureteral stents.



16. Incidence of stone-free patients three months or more following one or more ESWL procedures stratified by original stone burden. The Baylor group is compared with the FDA Cooperative Study Group (7).

tages, and limitations of each technology to his or her particular situation. The most appropriate modality from the cost/effectiveness and morbidity/effectiveness standpoints should be recommended along with a detailed explanation of why the recommended technique was chosen. Longitudinal follow-up is mandatory to assess patient well-being and the efficacy of treatment.

Urinary stones are commonly a recurrent problem. After surgical lithotomy, 15% of patients develop a new stone within two years, 40% of patients develop new stones within five years, and 80% develop new stones within 20 years. We do not have data regarding recurrence rates after elimination via the new technologies. However, it is well-accepted that virtually all patients can reduce their risk of calculogenesis by dietary and pharmacologic means.

In summary, the efficacy of stone elimination has increased while the morbidity has decreased. Several new and different but complementary technologies have contributed to these advances. Patient selection and patient education are particularly important in proper utilization of these technologies.

REFERENCES

1. Murphy LJT: The History of Urology. Charles C Thomas, Springfield, Ill, 1972.

2. Rupel E, Brown R: Nephroscopy with removal of stone following nephrostomy for obstructive calculous anuria. J Urol 46:177–182, 1941.

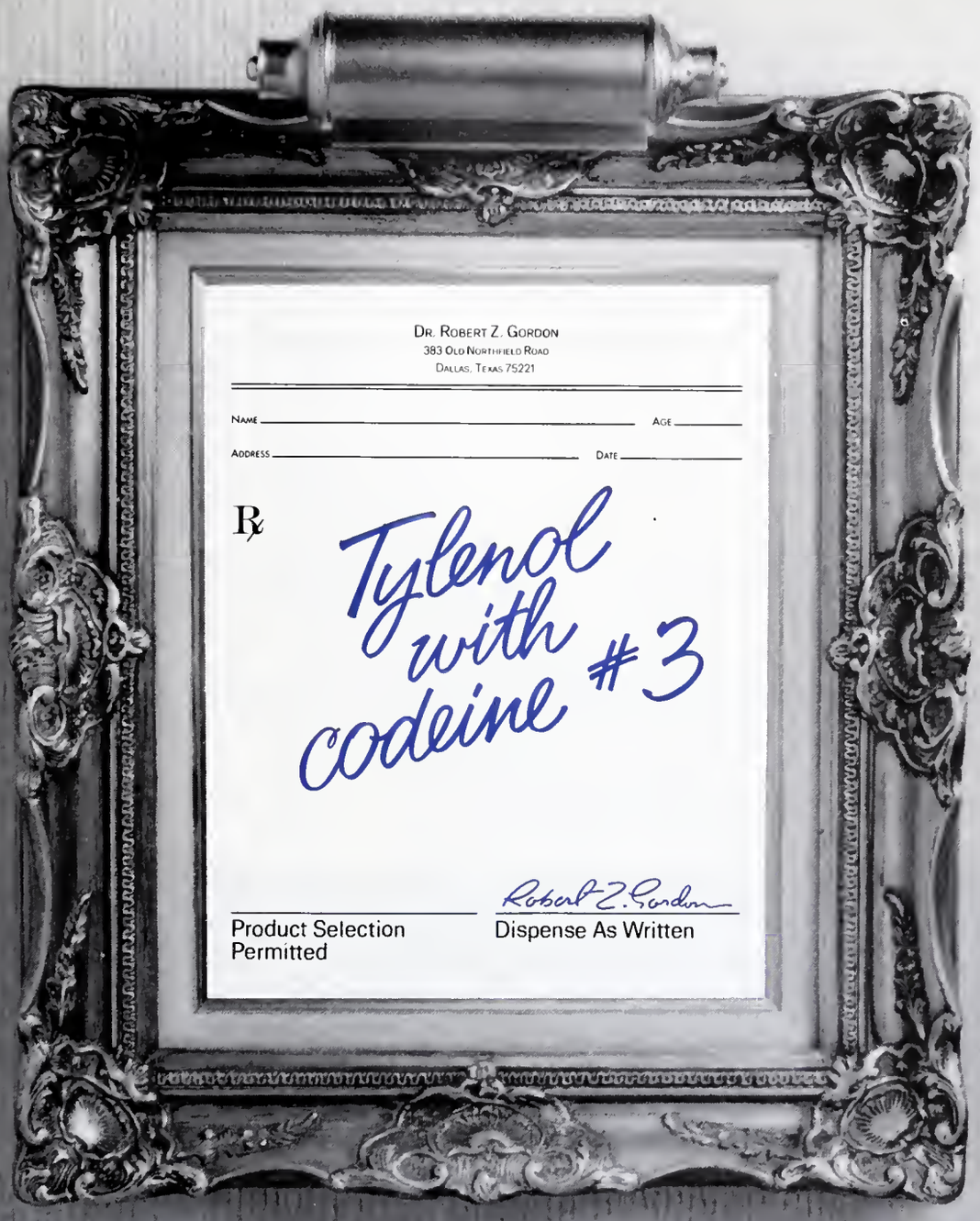
3. Goodwin WE, Casey WC, Woolf W: Percutaneous trocar (needle) nephrostomy in hydronephrosis. JAMA 157:891–894, 1955.

4. Bissada NK, Meacham KR, Redman JF: Nephrostoscopy with removal of renal pelvic calculi. J Urol 112(4):414–416, 1974.

5. Alken P: Percutaneous ultrasonic destruction of renal calculi. Urol Clin North Am 9(1):145–151, 1982.

6. Chaussy C, Brendel W, Schmiedt E: Extracorporeally induced destruction of kidney stones by shock waves. Lancet 2(8207):1265–1268, 1980.

7. Drach GW, Dretler S, Fair W, et al: Report of the United States cooperative study of extracorporeal shock wave lithotripsy. J Urol 135(6):1127–1133, 1986.



CREATE A SIGNED ORIGINAL

to be sure your patients get...

Tylenol®
ACETAMINOPHEN
with codeine
phosphate

TABLETS C III ELIXIR C V

Tablets: Contain Codeine Phosphate*: No. 3—30 mg; No. 4—60 mg—plus Acetaminophen 300 mg.
Elixir: Each 5 mL contains 12 mg Codeine Phosphate* plus 120 mg Acetaminophen (Alcohol 7%).
*Warning: May be habit forming.

© McNEILAB, INC., 1987

TYCT 6445-A

A Referral Center for Cardiopulmonary Diseases

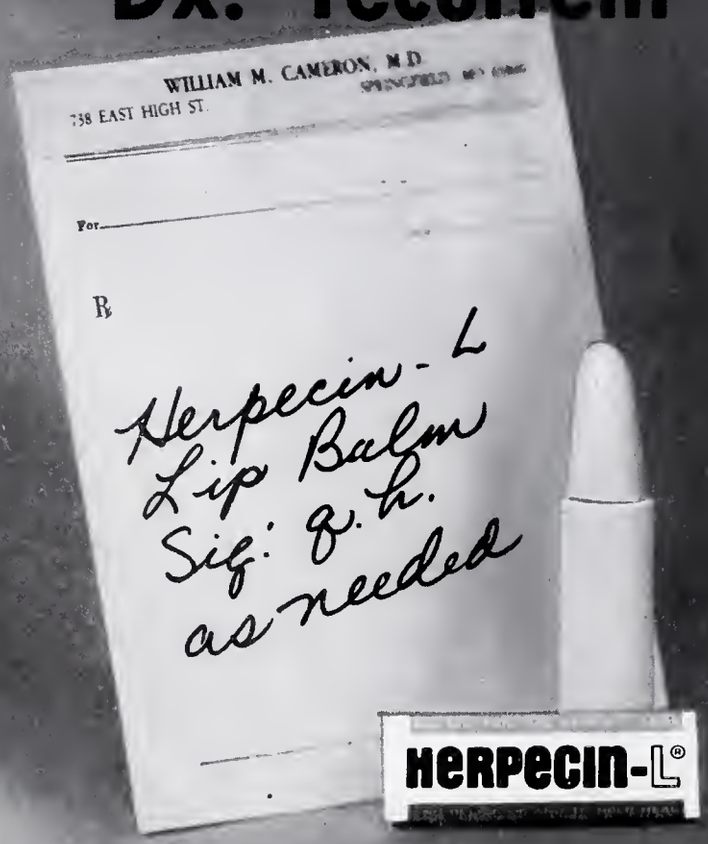
Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address: P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

KAREN H. CALHOUN, MD
CHARLES M. STIERNBERG, MD
WILLIAM D. CLARK, DDS, MD
BYRON J. BAILEY, MD

Unusual presentation of fibrous dysplasia

A case of fibrous dysplasia is described in which the unusual site and manner of presentation delayed diagnosis. Fibrous dysplasia occurs primarily in children. The initial symptom of facial bone involvement is usually painless facial asymmetry. The child we report presented at age 12 with her third episode of left-sided acute dacryocystitis and no bony facial asymmetry. She was found to have a mucosa-covered mass originating on the left lateral nasal wall and almost entirely obstructing the nasal airway.

A CT scan revealed a large calcified mass involving the inferior turbinate. Biopsy suggested fibrous dysplasia. The patient subsequently underwent resection of all involved bone via a sublabial degloving approach (chosen to avoid external facial scarring). At one year after surgery, the patient has an excellent cosmetic result, a patent nasal airway, and no epiphora.

Facial asymmetry in late childhood or early adulthood is the usual presentation of fibrous dysplasia of the facial bones. It is more common in females, and up to 25% of these patients may have a second site of skeletal involvement (1). Up to 10% of cases of monostotic fibrous dysplasia involve the craniofacial bones (2).

The etiology of fibrous dysplasia remains unknown. It was thought at one time that the disease occurred in a site of previous trauma, but more recent studies have failed to confirm this correlation (3).

Diagnosis of fibrous dysplasia is made by biopsy. The tissue shows a fibrous connective tissue matrix with scattered bony or osteoid trabeculae (4). Radiographs of these lesions may show lucent or sclerotic areas, depending on the ratio of connective tissue to bone (5).

Treatment of fibrous dysplasia is usually conservative, since it is a benign process with less than 0.5% incidence of malignant transformation (6). The disease often becomes inactive at the time of puberty, but this is variable and, occasionally, no arrest occurs (7). Small asymptomatic lesions require only periodic observation. Cosmetic deformity is the most common indication for surgery, and partial removal with curettage can be performed for these cases (5,8). Occasionally the lesions cause dysfunction of adjacent structures, and more aggressive surgical removal is necessary. Even with apparently complete removal there is a 10% to 20% incidence of recurrence.

Poster Presentation at the meeting of the American Academy of Otolaryngology—Head and Neck Surgery in Atlanta, Georgia, Oct 20–24, 1985.

A case is presented here in which the lesion's site and manner of presentation were unusual, thereby delaying the diagnosis.

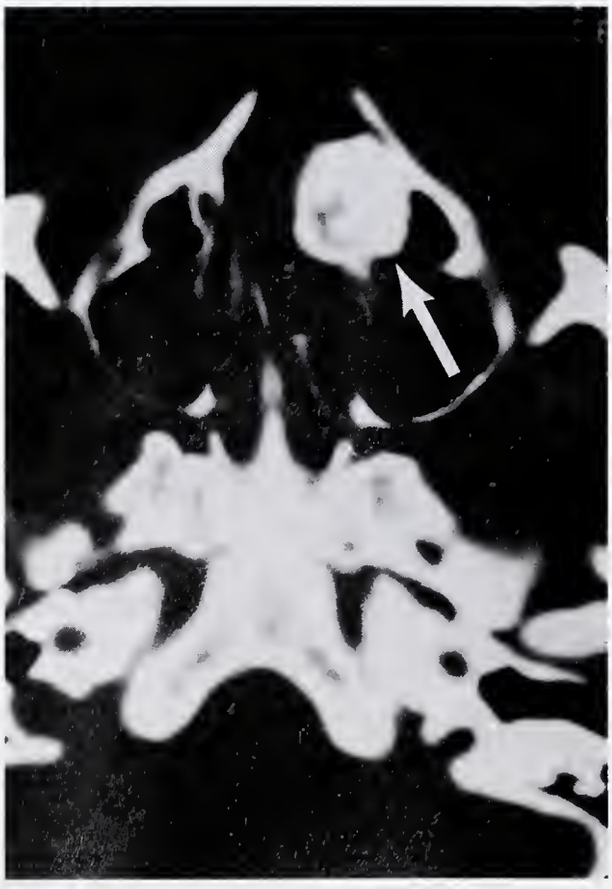
Case report

A 12-year-old girl presented with her third episode of left-sided dacryocystitis in three years. She had no epiphora between episodes and no nasal obstruction. She was referred to the otolaryngology service when a CT scan showed an intranasal mass.

Physical examination revealed an erythematous fluctuant mass at the left medial canthus. Intranasally, the septum was slightly deviated, and there was a large mucosa-covered mass on the left lateral nasal wall. Vision was normal, as was the remainder of the head and neck examination. The CT scan (Fig 1) showed a calcified mass adjacent to a walled-off abscess in the area of the left medial canthus.

Her abscess was treated by incision and drainage and appropriate intravenous antibiotics (chloramphenicol and gentamicin). Biopsy of the intranasal mass revealed a proliferation of fibrous tissue with scattered trabeculae of immature bone, consistent with the diagnosis of fibrous dysplasia (Fig 2).

Several weeks after the infection had resolved, the patient underwent a left partial medial maxillectomy through a sublabial approach to the midface

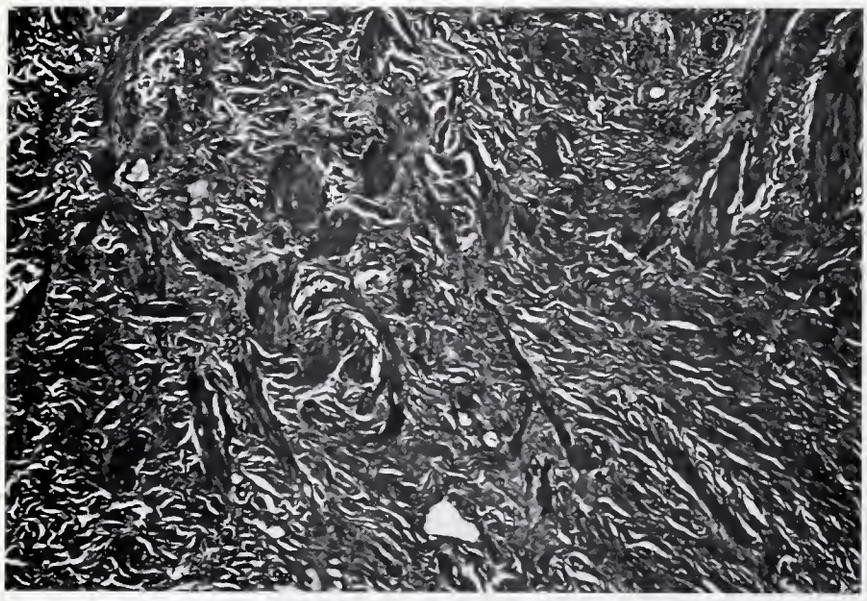


1. CT scan shows dense mass in the medial maxilla and inferior turbinate area

Karen H. Calhoun, MD, Charles M. Stiernberg, MD, and Byron J. Bailey, MD, Department of Otolaryngology, The University of Texas Medical Branch, E-21, Galveston, TX 77550. William D. Clark, DDS, MD, Las Cruces, New Mexico, and clinical staff, Department of Otolaryngology, The University of Texas Medical Branch. Send reprint requests to Dr Calhoun.

(9) (Fig 3). Fibrous dysplasia involved the anterior two thirds of the inferior turbinate and the lateral nasal wall. The involved bone was soft, very vascular, and blended indistinctly with normal bone. A dacryocystorhinostomy was performed at the same time by the referring ophthalmologist. The patient's postoperative course was uneventful. One year after surgery the patient had a patent nasal airway with no epiphora.

2. Photomicrograph showing trabeculae of immature bone within fibrous tissue (sometimes referred to as a Chinese writing *pattern).*



3. Intraoperative photo showing degloving of soft tissue of midface. The enlarged inferior turbinate with soft, coarsely-textured bone is visible.

Discussion

In this case the diagnosis of fibrous dysplasia of the medial maxilla and inferior turbinate was delayed by an unusual presentation, recurrent acute dacryocystitis. Dacryocystitis is most often secondary to fibrotic obstruction within the lacrimal drainage system. This is frequently idiopathic. Tumors and other causes of external obstruction are relatively uncommon (10,11). In this case the patient probably had chronic dacryocystitis from constant impingement on the lacrimal duct by the fibrous dysplasia mass. It is interesting that despite a large intranasal mass, she had no nasal symptoms or facial asymmetry. Her third episode of acute dacryocystitis prompted her ophthalmologist to order a CT scan which led to the diagnosis of an intranasal mass. An adequate intranasal examination earlier in the patient's course may have led to an earlier diagnosis.

To our knowledge, involvement of the inferior turbinate by fibrous dysplasia in the manner described in this case has not been previously reported. The sublabial degloving approach to the midface provided excellent exposure and avoided the need for a lateral rhinotomy. The patient has a good cosmetic result with no nasal deformity or large facial scar.

REFERENCES

1. Fitzer PM: Radionuclide angiography—brain and bone imaging in craniofacial fibrous dysplasia (CFD): case report. J Nucl Med 18(7):709–712, 1977.

2. Nager GT, Holliday MJ: Fibrous dysplasia of the temporal bone. Update with case reports. Ann Otol Rhinol Laryngol 93(6 Pt 1):630–633, 1984.

3. Harris WH, Dudley HR, Barry RJ: The natural history of fibrous dysplasia. J Bone Joint Surg 44a:207–233, 1962.

4. Batsakis JG: Tumors of the Head and Neck, ed 2. Baltimore, Williams and Wilkins, 1979, pp 400–402.

5. Talbot IC, Keith DA, Lord IJ: Fibrous dysplasia of the cranio-facial bones. A clinico-pathological survey of seven cases. J Laryngol Otol 88(5):429–443, 1974.

6. Becker GD, Ridolfi R, Ingber C: Fibrous dysplasia confined to the ethmoid sinus. Otolaryngol Head Neck Surg 91(5):565–567, 1983.

7. Moore AT, Buncic JR, Munro IR: Fibrous dysplasia of the orbit in childhood. Clinical features and management. Ophthalmology 92(1):12–20, 1985.

8. Osaki JM, Hecker R, Kramer HS Jr: Albright's syndrome involving the facial bone. J Oral Surg 39:227–230, 1981.

9. Sachs ME, Conley J, Rabuzzi DD, et al: Degloving approach for total excision of inverted papilloma. Laryngoscope 94(12 Pt 1):1595–1598, 1984.

10. Weil BA: Dacryocystitis, in Veirs ER (ed): The Lacrimal System: Proceedings of the First International Symposium, ed 1. St. Louis, C.V. Mosby Co, 1971, pp 118–125.

11. Veirs ER: Lacrimal Disorders: Diagnosis and Treatment, ed 1. St Louis, C.V. Mosby Co, 1976, pp 72–76.

Motrin® 800 TABLETS mg

ibuprofen

Extra strength
Convenience
Economy

Upjohn

A Century of Caring
1886·1986

1986 The Upjohn Company

J-6138 January 1986

News from DISTA about a new dosage form of cephalexin

ANNOUNCING NEW

Keflet™ TABLETS

cephalexin

All the advantages of cephalexin in a convenient tablet form

- Backed by over 15 years of clinical experience
- Smaller tablet is specially shaped and coated for easier swallowing
- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:

250-mg Tablets

500-mg Tablets

Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

© 1987, DISTA PRODUCTS COMPANY

Brief Summary. Consult the package literature for prescribing information

Indications and Usage: Keflet™ Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms.

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β-hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx; however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S pneumoniae, Haemophilus influenzae,* staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin-structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli, P mirabilis,* and *Klebsiella* sp

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile.* Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: *General*—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers—The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose, the drug reached a maximum level of 4 μg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: *Gastrointestinal*—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity—Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

PV 2211 DPP

[111786]

Additional information available to the profession on request from

DISTA

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd by Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

720073

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS MEDICAL LIABILITY TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

BARLOW SMITH, LLB, MD

The groundless malpractice suit: one remedy, summary judgment

Barlow Smith, LLB, MD,
8333 Summerwood Dr,
Austin, TX 78759.

The groundless malpractice action is a continuing worry for physicians. Summary judgment is a remedy that may spare their waiting for trial to be exonerated legally. A recent case, Wheeler v Aldama-Leubbert, *illustrates the effective use of summary judgment to exonerate a defendant physician in a groundless malpractice action.*

A continuing worry for physicians is the threat of a groundless malpractice action against them. Their fear is that a patient who has suffered an unavoidable sequela of treatment may persuade a jury to award damages against the treating physician despite his or her diligence in providing adequate care. Must he await trial to alleviate the fear? A recent case (1) provides remedy by way of summary judgment, whereby the diligent physician may be exonerated without trial.

Summary judgment (2) is a means of deciding issues presented in a civil lawsuit without the need for a trial. Once a lawsuit has begun, any party to the suit may seek summary judgment by serving notice to the opposing party and filing the motion for summary judgment in the court where the action was brought. (A motion is a request that the judge decide some issue presented in the case.) The principal sources of evidence used by the judge in arriving at his decision are the affidavits, the sworn statements of witnesses, which assert under oath certain facts in support of the ruling sought by the party making the motion for summary judgment. The opposing party likewise may submit affidavits. The judge then considers all the affidavits and other documentary evidence and renders a decision.

Wheeler v Aldama-Leubbert (1) illustrates the effective use of summary judgment by a defendant physician in a groundless malpractice suit. In that case, the plaintiff-patient alleged negligent brain surgery with resulting meningitis. Summary judgment was granted by the trial court solely on the basis of the defendant physician's affidavit.

The appellate court reproduced the surgeon's affidavit. It clearly delineated the pertinent medical history of a ruptured cerebral aneurysm, the diagnosis and how it was obtained and confirmed, the operative procedure and findings, the closely monitored postoperative course, complications of edema and meningitis and their management, including ventriculo-atrial shunt and antibiotics, and report of the ultimate complete recovery of the patient.

To negate the plaintiff's allegation that meningitis was negligently caused, the defendant surgeon described in addition to close postoperative monitoring and treatment the use of sterilized instruments and aseptic techniques. In addition, the defendant gave his age and educational attainments, professional qualifications, and association memberships. These were important to demonstrate his legal competence as a witness and his credibility.

The plaintiff had not countered the defendant's factual statements with any affidavit to support the allegation of negligence made in his pleadings in the case. (Pleadings are the formally stated claims for relief that a party to a lawsuit makes of an opposing party at the inception of the suit.) Thus, there was no material issue of fact left that was appropriate for trial (3). Once the defendant attempts to establish that the plaintiff's lawsuit is unfounded, the plaintiff has the burden of introducing evidence to the contrary (4).

McCord v Avery (5) illustrates ineffective use of summary judgment by the defendant physician in a malpractice suit. In that case the plaintiff alleged that his late wife, the patient, died postoperatively due to the negligence of the surgeon. The patient was an obese woman under medication for atrial fibrillation and hypertension who had a history of old inferior wall myocardial infarction. Summary judgment, granted by the trial court, was reversed by the appellate court despite the affidavit of a cardiologist that the defendant had done nothing that contributed to the patient's fatal cardiac arrest because the affiant cardiologist failed to state clearly what the applicable standard of care was. The appellate court held that the proof did not conclusively *show* that the defendant performed his duties in accordance with the applicable standard of care because he failed clearly to *state* the applicable standard of care.

McCord shows how incisively courts examine a motion for summary judgment. Indeed, there is some judicial reluctance to apply the remedy with full vigor (6) despite the fact that the "very mission of the summary judgment procedure is to pierce the pleadings and to assess the proof in order to see whether there is a genuine need for trial" (7).

Summary judgment has been less commonly invoked in lawsuits involving negligence or malpractice than in suits involving contracts, where documents considered alone pose issues that do not involve the demeanor or credibility of witnesses. Nevertheless, Wheeler demonstrates that in a clear-cut case the defendant in a groundless malpractice suit can vindicate himself without the protracted uncertainty of a trial if he is assisted by able counsel in preparing an affidavit that fulfills the requisites of a successful motion for summary judgment.

REFERENCES

1. Wheeler v Aldama-Luebbert, 707 SW2d, Court of Appeals of Texas, Houston (First District, 1986).

2. Schwarzer WW: Summary Judgment under the Federal Rules: Defining Genuine Issues of Material Fact, 99FRD465.

3. Ref 2 at 469, discusses what constitutes a material issue of fact.
4. Ref 1 at 215.
5. 708 SW2d 954, Court of Appeals of Texas, (Fort Worth, May 15, 1986).
6. Ref 2 at 466–7, treating Rule 56 of the Federal Rules of Civil Procedure, after which the Texas rule is patterned.
7. Ref 6 at 466, n.2.

The Devereux Foundation

is pleased to announce

the appointment of

David Wade, M.D.

as Medical Director of

its psychiatric hospital

for children and adolescents

in Victoria, Texas.

P.O. Box 2666, Victoria, Texas 77902
(512) 575-8271

CANCER. IT'S SIMPLY NOT WHAT IT USED TO BE.

Over the last 40 years, research programs supported by the American Cancer Society have made increasing progress in the treatment, detection and prevention of cancer.

In 1986 alone, the Society funded over 700 projects conducted by the most distinguished scientists and research institutions in the country.

Which is why, this year, hundreds of thousands of people will be successfully treated for the disease.

We are winning.

But we need you to help keep it that way.

Help us keep winning.

Created as a public service by
Ally Gargano/MCA Advertising LTD.

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Please indicate six key words for indexing.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine.*

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within four months of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine.*

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

PAUL M. ZELTZER, MD

EDWARD ARENSON, MD

Malignant central nervous system tumors in children: the dawn of a new era

Tumors of the central nervous system (CNS) are the second most common malignancies of children. They differ from those of adults by location (infratentorial versus supratentorial) and histopathology (low-grade glioma, medulloblastoma, and ependymoma in children and malignant glioma and metastatic carcinoma in adults). Improvements in surgical techniques and anesthesia have led to safer and more aggressive efforts to resect tumors for therapeutic purposes. In addition, accurate histopathologic diagnosis and intraoperative tumor staging are now mandatory to appropriately treat these children.

Until recently, radiation therapy (XRT) has been the gold standard for curability of malignant childhood CNS tumors, which have an overall five-year survival rate of approximately 50%. The prognosis for the more malignant types, such as glioma and metastatic medulloblastoma, is considerably worse (25% to 50%) than for more benign types (70% to 80%). Recently, two randomized prospective studies for gliomas and high-risk medulloblastoma using chemotherapy as an adjunct to surgery and XRT demonstrated a definite survival advantage over XRT alone. Clinical trials using aggressive chemotherapy before XRT have begun but it is too early to evaluate them. Promising areas of investigation include development of newer chemotherapy agents, identification of prognostic subgroups, and increased knowledge of tumor biology. Much progress has been made, but there is a pressing need for improvement. With well-designed clinical trials by multi-institutional cooperative groups, and a better understanding of the unique biologic characteristics of CNS tumors, we can be optimistic about the children's future.

In childhood, central nervous system (CNS) tumors are a diverse group of neoplasms that account for 19% of all cancer and are exceeded in frequency only by the leukemias in children under 15 years of age. The overall incidence of childhood CNS tumors is approximately 2.4 cases per 100,000, or 1,500 new cases per year in the US (1). Central nervous system tumors have in common their unique location in the crowded confines of the neuraxis where proximity to critical structures increases their potential for damage independent of histologic criteria.

In contrast to CNS tumors in adults that are mostly supratentorial, childhood CNS tumors are predominantly (55% to 60%) infratentorial (2). Histopathologic features further differentiate childhood CNS tumors from those of adults; most adult CNS tumors are usually high-grade astrocytomas or metastatic carcinomas, while low-grade astrocytomas and embryonic neoplasms such as medulloblastoma, ependymoma, and germ-cell tumors predominate in childhood.

Childhood tumors develop in a growing and maturing nervous system where the effects of the tumor, secondary hydrocephalus, and therapy all may substantially alter psychomotor development. Compared with other childhood solid tumors such as Wilms' tumor and rhabdomyosarcoma, CNS tumors have yielded less dramatically to modern multimodal therapy. This review emphasizes recent developments and newer trends in diagnosis and management of intracranial tumors.

New strategies for diagnosis and staging

Computed tomography (CT) has revolutionized the field of neurodiagnosis. In conjunction with intravenous contrast media, CT allows rapid, noninvasive, initial diagnosis of most CNS lesions. The addition of contrast enhancement allows definition of not only location and dimensions of a lesion, but it also provides information about tumor structure, density, and vascularity. The latter is associated with a high degree of malignancy, but both low- and high-grade gliomas may be enhanced with contrast (3). Computed tomography is excellent for defining supratentorial and posterior fossa lesions, but is less precise in evaluating lesions in the brain stem.

Magnetic resonance imaging (MRI), formerly called nuclear magnetic resonance imaging, is now under close scrutiny for diagnosis. It has the potential to provide not only anatomic, but also biological information without radiation exposure. Early experience with MRI suggests that it is superior to CT in imaging of posterior fossa and brain stem lesions. However, the precise role and indications for MRI versus CT have not been defined.

Pre-therapy staging is a relatively recent concept for management of brain tumors. Intra-operative staging with postoperative CT confirmation of resection, myelography, and cytology is now standard practice in most institutions. Medulloblastomas, ependymomas, and the group of primitive neuroectodermal tumors (PNET) have a significant risk of neuraxis dissemination via the cerebrospinal fluid (CSF) pathways; the drop metastases may produce acute cord compression and paralysis if not detected and treated with immediate XRT. For these reasons, myelography with CSF cytology are mandatory for initial staging of these latter tumors (4). Subarachnoid seeding can even occur in brain stem gliomas. The unique tendency for dissemination by the PNETs dictates the initial extent of disease evaluation with bone marrow examination and scans of bones, lungs, and liver before starting therapy.

Visual and auditory evoked potentials are noninvasive tests that can detect deficits caused by

Paul M. Zeltzer, MD, Associate Professor, Division of Hematology/Oncology, The University of Texas Health Science Center at San Antonio, TX, and the Children's Hospital of Los Angeles and University of Southern California School of Medicine; Edward Arenson, MD, Director, Hematology/Oncology, Department of Pediatrics, Albany Medical Center Hospital, NY. Send reprint requests to Dr Zeltzer, Department of Pediatrics, Division of Oncology, Children's Hospital of Los Angeles, PO Box 54700, Los Angeles, CA 90054–0700.

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

tumors in optic and auditory pathways; they are especially useful in very young and/or uncooperative children. Auditory evoked potentials have been helpful in assessing and monitoring patients with brain stem tumors, aiding the surgeons in removal or biopsy of lesions, and monitoring for chemotherapy toxicity of cis-platinum.

Other diagnostic tests frequently used prior to the availability of CT and MRI scanning have only rare application now: plain films of the skull, radionuclide brain scan, angiography, pneumoencephalography, ventriculography, and electroencephalography.

Revision of classification approaches

Traditionally, CNS tumors of childhood were classified on the basis of location (infratentorial versus supratentorial) and histology. But the practice of classifying tumors on the basis of location alone is no longer tenable (5–7). For example, medulloblastoma, a highly malignant, poorly differentiated small-cell tumor, was once thought to arise exclusively from the cerebellum, but identical tumors have been observed in the pineal and cerebral areas. Tumors from all three locations may contain elements of glial and/or ependymal and/or neuronal differentiation. Accordingly, it is now hypothesized that these tumors all may be variants of primitive neuroectodermal tumors (PNET) (7). If this hypothesis is verified, the traditional view of medulloblastomas being restricted to the posterior fossa will need to be revised (8). This controversy has generated much excitement in the once staid field of neuropathology (9). It is of more than academic interest, since prognostic staging and improved therapeutic strategies may result from a clearer understanding of the pathogenesis and biology of these tumors (10). A pineal gland tumor may be a "medulloblastoma" arising outside the posterior fossa (pineoblastoma), or a seminoma, or a germ cell tumor with yolk sac components; each of these tumors requires quite different therapies.

The nosology and pathogenesis of childhood CNS tumors may be further clarified in the near future with the addition of new and varied techniques: monoclonal antibody analysis of intracellular and cell surface antigens (11), neurohistochemical (10) and isoenzyme analyses (12,13), statistical analysis of histological features (6), tissue culture (14), and oncogene analysis (15).

Benefits of a multimodal approach

The successful approach of cooperative group trials employing multimodal, coordinated therapy has only recently been applied to the treatment of CNS tumors (16). There are a number of reasons for this delay. CNS tumors were difficult to diagnose before the era of the CT scans. Pediatricians deferred to neurologists and neurosurgeons because of the latter professionals' expertise in the neurological examination as a diagnostic technique. Imprecise and invasive radiographic tests were mandatory for diagnosis, yet biopsy often was not performed because of surgical risk. Thus, homogeneous populations of study patients were not defined. Staging systems by which homogeneous subgroups could be identified were known but not applied. Responses to therapy were difficult to assess (17). Lastly, there was until recently a pessimistic attitude on the part of physicians toward the potential benefit of any therapy.

Improvement in neurodiagnosis, reduction of surgical morbidity, as well as increased optimism about the potential benefits of chemotherapy, all have accelerated efforts to develop effective therapeutic strategies. More children are being referred to centers involved in prospective cooperative treatment studies sponsored by the Children's Cancer Study Group (CCSG) in San Antonio and Pediatric Oncology Group (POG) in Dallas and Houston.

Surgery

Current surgical objectives for CNS tumors include biopsy for histologic classification, debulking with as complete removal as is possible, staging, and correction of hydrocephalus by removal of tumor mass and/or by placement of ventriculoperitoneal (VP) shunt. The contribution of the VP shunt to possible peritoneal cavity metastases via the shunt is not clear (18).

Complete surgical removal or subtotal resection of the more benign CNS tumors, like cerebellar or hemispheric astrocytomas, substantially improves prognosis, while improvement in survival for more malignant lesions such as medulloblastoma is suggested. The operating microscope and stereotactic techniques allow biopsy in previously unapproachable areas and intraoperative placement of (removable) radioactive seeds (brachytherapy) as is now routine (19). Current operative mortality rate in children is less than 2%.

Radiation therapy

Radiation therapy for malignant CNS tumors has been used for more than 70 years and is the "gold standard" against which newer treatments must be compared. Medulloblastomas, ependymomas, germ cell tumors, and some recurrent low-grade astrocytomas are now curable by a combination of surgery and XRT. Malignant gliomas are sensitive to XRT, and duration of survival for patients with these lesions is significantly improved with XRT given in doses of 4,500 to 6,500 centigrays (cGy) to the tumor plus a clear margin. Whole brain and spinal cord (3,500 cGy) XRT plus a boost to the tumor bed are now employed routinely in medulloblastoma and other PNETs in order to prevent cranial and spinal cord metastases (20). With this

approach, at least 50% of patients with medulloblastoma are likely to be cured.

Chemotherapy

Pediatric oncologists have introduced major advances in treatment of other malignancies using combination chemotherapy programs (16). As a result, an aggressive and optimistic attitude toward treatment of all childhood malignancies has evolved and recently has been directed toward childhood CNS tumors.

It had been assumed that the blood-brain barrier prevented entry of chemotherapeutic agents into brain tumors (21). As a result, agents that were sought and developed had a high degree of lipid solubility, low molecular weight, and low ionization, characteristics suitable for crossing the blood-brain barrier. The agents with significant anti-tumor activity against CNS tumors included the nitrosoureas (CCNU, BCNU), procarbazine, vincristine, and others (21,22). But agents without these characteristics were not adequately evaluated. It has become apparent with the use of contrast-enhanced CT that the blood-tumor barrier is imperfect. It is now clear that vascular supply to CNS tumors is different from normal CNS blood supply and consequently penetration of a variety of agents with potential benefit can occur.

Previous reports of single and multi-agent chemotherapy in the treatment of childhood CNS tumors documented clinical responses (21,22). However, the studies had methodologic problems that confounded interpretation: frequent absence of clear criteria for evaluating response, inadequate control for the use of corticosteroids, small numbers of patients, previous treatment, lack of randomization, and a preponderance of retrospective studies (17). Nevertheless, objective tumor responses were demonstrated for a number of chemotherapy agents.

Multi-institutional, controlled, prospective studies to examine the role of adjuvant chemotherapy in the treatment of medulloblastomas and gliomas have been reported (22,23). More recently, the concept of giving aggressive chemotherapy prior to XRT in patients with measurable disease after surgery has been advocated (22,24,25). The rationale for this innovative approach that delays XRT is that chemotherapy in the unirradiated patient may allow more accurate assessment of response and increased efficacy since vascular supply may be adversely affected after XRT. In addition, bone marrow and CNS tolerance for chemotherapy is better before patients receive XRT. Further, certain agents, such as cisplatin, may be synergistic with subsequent XRT.

Innovative approaches for delivery of chemotherapy primarily in adults have been employed. These include intra-carotid infusions of BCNU and cisplatin. This approach has not yet been tested in children, but it has the potential advantage of direct drug delivery into the tumor bed to maximize efficacy while minimizing peripheral toxicity (26).

Current outlook for common childhood brain tumors

Major improvements are needed in the treatment of CNS tumors of childhood to achieve both long-term survival and reduce serious sequelae. Five-year survival for all childhood CNS tumors is approximately 50% (2). For children with benign tumors such as cerebellar astrocytomas and craniopharyngiomas, the five-year survival is greater than 80%. For the more malignant tumors, medulloblastomas and ependymoblastomas, the five-year survival is approximately 45% (2). Approximate five-year survival and current concepts of prognostic subgroups and treatment are summarized in Fig 1.

Putative prognostic factors for each tumor type include location (which may affect initial resectability), pattern of metastasis, histology, age, sex, and site of treatment. The latter factor is important and needs elaboration. A dramatic change in the regional referral pattern for children with CNS tumors occurred with the establishment of the Neuro-oncology Group at the Children's Hospital of Philadelphia (CHOP) in 1975. Prior to 1975, only 33% of children in the area were referred to CHOP while 70% were referred thereafter. From 1975 through 1978, three-year survival of all children with medulloblastoma at Children's Hospital was 53% versus 24% in all other area hospitals (27). Thus, enlightened and coordinated care for children with CNS tumors is probably an important determinant for outcome.

1. Current treatment and survival of childhood CNS tumors.

Tumor/Subgroup	Treatment	Approximate 5-year Survival (%)
Gliomas		
Cerebellar astrocytoma		
Type A		90
Complete resection	Surgery	
Partial resection	Surgery, XRT	
Type B	Surgery, XRT, ?chemotherapy	25
Brain stem glioma	XRT, ?hyperfractionation, ?chemotherapy	20–25
Supratentorial astrocytoma		
Low-grade		60–70
Complete resection	Surgery	
Partial resection	Surgery, XRT	
High-grade	Surgery, XRT, chemotherapy	30–40
Medulloblastoma, Ependymoma		
Lower risk	Surgery, craniospinal XRT	70
Higher risk	Surgery, craniospinal XRT, chemotherapy	30–50
Pineal and suprasellar tumors, histopathology dependent	Local XRT, chemotherapy for some tumors	
Craniopharyngioma		
Complete resection	Surgery	75–80
Partial resection	Surgery, XRT	60–80

Long-term effects

The price of using curative doses of XRT is unacceptably high. Major sequelae in the form of neurological deficits, psychomotor retardation (28,29), growth failure (30), and endocrinopathies (30) occur in children, especially in those under three years of age. Thus, new strategies for achieving cure of these tumors while sparing the developing nervous system must be developed. Recently, Van Eys et al have treated infants with brain tumors with chemotherapy alone with promising results (31).

Conclusion

Despite substantial progress, childhood CNS tumors continue to produce a disproportionate share of death and disability. Advances in surgery and XRT are impressive, but it is likely that major advances in treatment of childhood CNS tumors will come through accurate histopathologic diagnosis and optimal use of chemotherapy and XRT. Goals of current studies include both improved survival and reduction of serious psychomotor sequelae. Use of pre-XRT and multi-agent chemotherapy has promise in achieving both goals and is currently under evaluation. Increased referral of children with CNS tumors to children's oncology centers, where prospective multi-institutional studies are conducted and where optimal coordinated medical and psychosocial care is provided, should lead to a better outlook for these unfortunate children.

REFERENCES

1. Silverberg E, Lubera J: Cancer statistics, 1986. CA 36:9–25, 1986.
2. Cohen ME, Duffner PK: Brain Tumors in Children: Principles of Diagnosis and Treatment (International Review of Child Neurology Series). New York, Raven Press, 1984, pp 136–155.
3. Segal HD, Batnitzky S, Zee CS, et al: Computed tomography in the diagnosis of intracranial neoplasms in children. Cancer 56(7 Suppl):1748–1755, 1985.
4. Harisiadis L, Chang CH: Medulloblastoma in children: a correlation between staging and results of treatment. Int J Radiat Oncol Biol Phys 2(9–10):833–841, 1977.
5. Yates AJ, Becker LE, Sachs LA: Brain tumors in childhood. Childs Brain 5(1):31–39, 1979.
6. Gilles FH, Leviton A, Hedley-White T: "Medulloblastoma" a single entity? in Zeltzer PM, Pochedly C (eds): Medulloblastomas in Children: New Concepts in Tumor Biology, Diagnosis, and Treatment. New York, Praeger Press, 1986.
7. Rorke LB: The cerebellar medulloblastoma and its relationship to primitive neuroectodermal tumors. J Neuropathol Exp Neurol 42(1):1–15, 1983.
8. Rubinstein LJ: The cerebellar medulloblastoma: its origin differentiation, morphological variants and biological behavior, in Vincken PJ, Bruyn GW (eds): Handbook of Clinical Neurology: Tumors of the Brain and Skull, Part III. Amsterdam, North Holland Publishing Co, 1975, pp 167–173.
9. Rubinstein LJ: A commentary on the proposed revision of the World Health Organization classification of brain tumors for childhood brain tumors. Cancer 56(7 Suppl):1887–1888, 1985.
10. Packer RJ, Sutton LN, Rorke LB, et al: Prognostic importance of cellular differentiation in medulloblastoma of childhood. J Neurosurg 61(2):296–301, 1984.
11. Coakham HB, Garson JA, Brownell B, et al: Monoclonal antibodies as reagents for brain tumour diagnosis: a review. J R Soc Med 77(9):780–787, 1984.
12. Zeltzer PM, Schneider SL, Marangos PJ, et al: Differential expression of neural isoenzymes by human medulloblastomas and gliomas and neuroectodermal cell lines. JNCI 77(3):625–631, 1986.
13. Zeltzer PM, Marangos PJ, Evans AE, et al: Serum neuron-specific enolase in children with neuroblastoma. Relationship to stage and disease course. Cancer 57(6): 1230–1234, 1986.
14. Rubinstein LJ, Herman MM: The contribution of tissue and organ culture to the differentiating capabilities of the cerebellar medulloblastoma, chapter 4, in Zeltzer PM, Pochedly C (eds): Medulloblastomas in Children: New Concepts in Tumor Biology, Diagnosis, and Treatment. New York, Praeger Press, 1986.
15. Seeger RC, Brodeur GM, Sather H, et al: Association of multiple copies of the N-myc oncogene with rapid progression of neuroblastomas. N Engl J Med 313(18): 1111–1116, 1985.
16. Hammond GD: Lucy Wortham James lectures. Multidisciplinary clinical investigation of the cancers of children. A model for the management of adults with cancer. Cancer 55(6):1215–1225, 1985.
17. Zeltzer PM, Friedman HS, Norris DG, et al: Criteria and definitions for response and relapse in children with brain tumors. Cancer 56(7 Suppl):1824–1826, 1985.
18. Albright L: Surgical aspects of medulloblastoma, chapter 10, in Zeltzer PM, Pochedly C (eds): Medulloblastomas in Children: New Concepts in Tumor Biology, Diagnosis, and Treatment. New York, Praeger Press, 1986.
19. Chin HW, Maruyama Y, Young B, et al: Intracerebral neutron brachytherapy for hemispheric glioblastoma multiforme. A pilot study. J Neurooncol 2(4):341–347, 1984.
20. Hornback NB: Radiation therapy in treatment of medulloblastoma in childhood, chapter 11, in Zeltzer PM, Pochedly C (eds): Medulloblastomas in Children: New Concepts in Tumor Biology, Diagnosis, and Treatment. New York, Praeger Press, 1986.
21. Shapiro WR, Byrne TN: Chemotherapy of brain tumors—basic concepts, in Walker MD (ed): Oncology of the Nervous System. Boston, Kluwer, 1983.
22. Zeltzer PM: Chemotherapy for medulloblastoma: a review of treatment in recurrent and de novo tumors, in Zeltzer PM, Pochedly C (eds): Medulloblastomas in Children: New Concepts in Tumor Biology, Diagnosis, and Treatment. New York, Praeger Press, 1986.
23. Ertel I, Boesel C, Evans A, et al: Adjuvant chemotherapy of high grade astrocytomas in children: radiation therapy with or without CCNU, vincristine, and prednisone, meeting abstract. Proc Am Soc Clin Oncol 3:79, 1984.
24. Bleyer WA, Milstein J, Balis F, et al: "8 drugs in 1 day" chemotherapy for brain tumors: a new approach and rationale for preradiation chemotherapy, meeting abstract. Med Pediatr Oncol 11:213, 1983.

25. Zeltzer P, Odom L, Priest J: Pilot study of pre- and post-radiation therapy (XRT) chemotherapy using 8 drugs in one day (8 in 1) for high risk medulloblastoma: effect on XRT delivery and toxicity, meeting abstract. Proc Am Soc Clin Oncol 5:211, 1986.

26. Kapp JP, Vance RB: Supraophthalmic carotid infusion for recurrent glioma: rationale, technique, and preliminary results for cisplatin and BCNU. J Neurooncol 3(1):5–11, 1985.

27. Kramer S, Meadows AT, Pastore G, et al: Influence of place of treatment on diagnosis, treatment, and survival in three pediatric solid tumors. J Clin Oncol 2(8):917–923, 1984.

28. Duffner PK, Cohen ME, Thomas P: Late effects of treatment on the intelligence of children with posterior fossa tumors. Cancer 51(2):233–237, 1983.

29. LeBaron S: Neuropsychological sequellae in survivors of medulloblastoma: a review, in Zeltzer PM, Pochedly C (eds): Medulloblastomas in Children: New Concepts in Tumor Biology, Diagnosis, and Treatment. New York, Praeger Press, 1986.

30. Deutsch M: Late effects of radiotherapy for medulloblastoma: a review with proposals for future directions, in Zeltzer PM, Pochedly C (eds): Medulloblastomas in Children: New Concepts in Tumor Biology, Diagnosis, and Treatment. New York, Praeger Press, 1986.

31. Van Eys J, Cangir A, Coody D, et al: MOPP regimen as primary chemotherapy for brain tumors in infants. J Neurooncol 3(3):237–243, 1985.

ACKNOWLEDGMENTS

Dr Zeltzer is supported by the Robert J. and Helen C. Kleberg Foundation and the Concern II Foundation.

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Regulation of growth in children with chronic illness. Michael S. Kappy, MD, PhD. American Medical Association, *American Journal of Diseases of Children,* vol 141, May 1987, pp 489–493.

Children with chronic illness often have poor growth and short stature. The causes are mutliple and are related to the organ systems involved, malnutrition, superimposed infections, and the effects of specific therapy, eg, steroids. The impairment of growth contributes to poor body image in these children and may result in problems complying with the treatment regimen and poorer long-term outcome, eg, in diabetes. The somatomedin system or net circulating somatomedin activity in the blood has been shown to mediate growth in children. In addition, many authors have now documented reduced somatomedin generation by the liver and an increase in plasma factors that inhibit the effects of somatomedin on growth in children with chronic illness. Recognition of these phenomena may lead to the use of somatomedin to promote growth in certain of these children in the future.

Comparison of six pharmacologic regimens for hypercholesterolemia. Jeffrey M. Hoeg, MD; Martha B. Maher, BSN, MS; Kent R. Bailey, PhD, et al. Technical Publishing, *American Journal of Cardiology,* vol 59, 1987, pp 812–815.

Six sequential clinical trials were conducted over five years to evaluate the safety and efficacy of different treatment regimens for hypercholesterolemia. Of all the study participants, 11 patients were evaluated in all six clinical trials using the following regimens: neomycin, neomycin/niacin, cholestyramine, cholestyramine/neomycin, lovastatin, and lovastatin/neomycin. All six regimens significantly ($p < 0.05$) reduced both total and low-density lipoprotein cholesterol concentrations by 25% to 42% from baseline levels. Only neomycin/niacin, cholestyramine, and lovastatin significantly increased the high-density lipoprotein (HDL) cholesterol concentration, reducing the total cholesterol-high-density lipoprotein cholesterol ratio to less than 4.7. Thus, all six tested regimens were effective in modifying the plasma lipoprotein concentrations in type II hyperlipoproteinemia, but neomycin/niacin, cholestyramine, and lovastatin had the most favorable impact. Only lovastatin treatment was free of adverse effects.

Calcified renal masses. John Patterson, MD, D. Lohr, C. Briscoe, et al. Professional Medical Services Company, *Urology,* vol 29, no 4, April 1987, pp 353–356.

A review of the literature and the University of Kentucky Medical Center/Lexington Veterans Administration Medical Center experience regarding calcification of renal masses was undertaken. Twenty per cent of calcified renal masses cannot be easily characterized by CT scan as malignant or benign and are indeterminate. These lesions must be followed closely with follow-up CT scanning or undergo surgical exploration, as 40% may be malignant.

Colorectal cancer: Lahey Clinic experience, 1972–1976. An analysis of prognostic indicators. Miguel L. DeLeon, MD; David J. Schoetz, Jr, MD; John A. Coller, MD, et al. J.B. Lippincott Company, *Diseases of the Colon and Rectum,* vol 30, 1987, pp 237–242.

The records of 344 consecutive patients with colorectal cancer treated operatively at the Lahey Clinic from 1971 through 1976 were reviewed, and the effects of 41 clinical and pathologic variables on survival were analyzed. The variables associated with poorer five-year survival rates were advanced Dukes' stage, four or more positive nodes, blood vessel invasion, lymphatic invasion, circumferential involvement, and obstruction at initial presentation. As a group, patients with right colon cancers (cecum and ascending colon) had the best survival rates. When fistula formation or localized perforation had occurred, *en bloc* resection of locally involved adjacent viscera improved survival rates. These prognostic indicators aid in the selection of patients for wider colonic and mesenteric resections.

Risk factors for human immunodeficiency virus (HIV) infections in homosexual men. William W. Darrow, PhD; Dean F. Echenberg, MD, PhD; Harold W. Jaffe, MD, et al. American Public Health Association, *American Journal of Public Health,* vol 77, no 4, April 1987, pp 479–483.

To clarify risk factors for infection with the human immunodeficiency virus (HIV) the authors selected at random 785 homosexual men who had participated in studies of hepatitis B in San Francisco in 1978–1980 for a follow-up study of the acquired immunodeficiency syndrome. Although most had not been contacted in more than five years, 492 (63%) were located and enrolled. The 240 (67%) who had developed antibodies to HIV, as measured by an enzyme-linked immunosorbent assay (ELISA), were compared with 119 who had remained seronegative. In multivariate analyses, receptive anal intercourse with ejaculation by nonsteady sexual partners, many sexual partners per month, and other indicators of high levels of sexual activity were highly associated with seroconversions. None of the sexual practices that we studied appeared to offer protection against HIV infection.

Feature

TMA Advocacy Committee: A positive force for change

Under the guidance of a newly formed Physician Advocacy Committee, Texas Medical Association is continuing as a positive influence on the future direction of the Medicare peer review system carried out by the Texas Medical Foundation. During their most recent meeting, the association's House of Delegates endorsed the advocacy committee's 29 recommendations for improvement of the PRO process. The recommendations were the product of conferences with the foundation, as well as a review of correspondence from physicians and press reports, and a detailed analysis of the PRO program in Texas and other states.

Following are a historical perspective on the foundation and the advocacy committee's recommendations.

At times, the Texas Medical Association and Texas Medical Foundation appear to be bound by tenuous ties, but, in fact, the two organizations have a shared history that spans 15 years. In 1972, Texas Medical Association chartered the Texas Medical Foundation to serve as a nonprofit independent organization to represent Texas physicians in contracts with private, public, and governmental entities. At its inception, the foundation participated in six categories of activities: generation of physician-controlled data on the private practice of medicine; finding a solution to the paperwork problem; providing services to support private practice (ie, business management services, practice information, claims service); evaluating medical care; finding information and helping to alleviate the medical manpower problem; and working to provide medical care for the poor.

Meeting in a special session in January 1973, TMA's House of Delegates stipulated that authority would not be granted to the foundation "to . . . act as a Professional Standards Review Organization," the forerunner of the professional review organization (PRO). Rather, another TMA-chartered entity, the Texas Institute of Medical Assessment (TIMA), was to have that responsibility.

PSROs had been enacted in October 1972 to "promote the effective, efficient and economical delivery of health care services of proper quality for which payment may be made" under the Medicare, Medicaid, and Maternal and Child Health Care programs. Following a five-year struggle in which TMA was successful in convincing the Department of Health, Education, and Welfare that Texas should be a single PSRO rather than being divided into nine areas, and with TMF's assistance, TIMA became the Texas PSRO in September 1978.

Three years later, in 1981, based on an evaluation of the PSRO program by the Congressional Budget Office, the administration proposed to phase out federal funding of PSROs. On Sept 30, 1981, TIMA's offices were closed. On Aug 19, 1982, Congress passed the Tax Equity and Fiscal Responsibility Act (TEFRA), which repealed PSROs and replaced them with the Utilization and Quality Control Peer Review Organization (PRO) Program.

On Oct 1, 1984, the Health Care Financing Administration (HCFA) designated TMF as the PRO for Texas. The two-year contract was renewed in 1986.

TMA has been a firm advocate of voluntary physician-directed peer review. However, the present Medicare PRO program, especially the sanction and denial procedures, is of growing concern to the association. Many TMA members report with increasing frequency instances where peer review has not been conducted in the best interest of patients or physicians. In response to these concerns, 1986–1987 TMA President Jim Bob Brame, MD, Eldorado, appointed the TMA Physician Advocacy Committee. Nancy W. Dickey, MD, Richmond, chairs the committee. The other members are D. Clifford Burross, MD, Wichita Falls; Jimmie D. Bussey, MD, Newton; Robert P. Carroll, Jr, MD, Nacogdoches; C. Tom Clayton, MD, Denton; John P. Coughlin, MD, San Angelo; and Harold Skaggs, MD, Austin.

The committee's primary purpose is to serve a communication, liaison, and monitoring role in regard to the Texas Medical Foundation. Additionally, the committee advocates for physicians in activities related to quality assurance and utilization review.

Committee members have met with representatives of TMF, reviewed correspondence from physicians, and studied the PRO laws. Their studies show that at the beginning of 1987, TMF had recommended sanctions against 23 Texas physicians. Forty-seven more cases were pending before the Statewide Quality Assurance Committee. Most of this activity involved physicians practicing in rural areas. To address this imbalance in sanction activity and other problems, the advocacy committee offered—and the House approved—29 recommendations.

These have been referred to appropriate bodies for implementation through changes in the PRO law, contract modifications, or changes in TMF's internal policies. Considering the recommendations are: the Council on Socioeconomics, the TMA/TMF Liaison Committee, the Hospital Medical Staff Section, the Texas Delegation to the American Medical Association, the Council on Medical Education, the Council on Annual Session and Scientific Programming, and the Interspecialty Society Committee.

Following are the 29 recommendations, which fall into five categories:

Rural/urban practice differentials

1. That physician advisors be representative of the physician(s) under review.

2. That the TMF Board of Directors and Executive Committee be representative of physicians in the TMF membership, with consideration given to rural medical practice.

3. That rural hospitals be encouraged to seek agreements with referral facilities to assist in peer review functions.

Selection and training of medical reviewers

4. That the physician advisor (PA) be required to request that the hospital inform an attending physician when one of his/her patient charts is pulled. A specific time should be set for the attending physician to be available if the PA needs to discuss item(s) on the chart.

5. That the number of charts reviewed by the hour be determined by the complexity of the cases reviewed rather than by arbitrary preset productivity standards.

6. That the assessment of physician advisors' performance be ongoing in order to assure that proper case screening occurs and that only appropriate quality and utilization concerns are forwarded to the Regional Quality Assurance Committee (RQAC).

7. That physician specialists utilized in the PRO process be qualified and not be limited to PAs or other TMF members, when suitable TMF members are not available.

PRO quality review process

8. That only physicians in active practice and themselves subject to PRO review be reviewers. All reviewing body members (at all levels, including the Board of Trustees and its Executive Committee) should have direct patient care responsibilities (minimum 26 hospitalized patients per year) and have admitting privileges in at least one hospital.

9. That the attending physician in a case placed on "suspense status" be informed that a "possible quality concern" exists in the case, but that this concern does not warrant any corrective action at this time.

10. That PAs be given feedback on decisions of the Regional Quality Assurance Committee in order to aid in the education and training of PAs and bring a standardization of the process across TMF regions. When poor screening performance is identified, consideration should be given to focusing on the *reviewer's* fund of knowledge.

11. That involvement of appropriate hospital medical staff committees be sought in the development of educational and "corrective action" recommendations.

12. That all cases determined as not being quality issues should not appear on a physician's profile for subsequent case review.

Sanction protocol and due process

13. That the locality, equipment, resources, access to consultants, and availability of patient transportation resources, etc, which affect the level of medical care provided be specifically addressed and documented in the record by TMF prior to the issuance of a sanction or corrective action finding or recommendation.

14. That if the physician's "fund of knowledge" to treat certain conditions is being questioned in considering the physician's willingness and ability to meet Medicare requirements, a separate panel should be appointed to address this issue.

15. That the PRO process be amended to eliminate the COBRA-mandated notification to patients of Medicare payment denials, and that such notification not be issued until after a physician's due process rights have been exhausted.

16. That the PRO process be amended to eliminate the authority of the Office of the Inspector General (OIG) to issue public notices of sanction decisions until after the reviewed physician has exhausted his or her appeals rights.

17. That the confidentiality directive contained in the notice of violation be modified to delete the intimidating language to physicians wanting to obtain legal or expert medical assistance.

18. That the definition of "gross and flagrant" be narrowed to include violations that cause the PRO to conclude that the continuation of medical practice by the physician would constitute an immediate danger to the life and limb of Medicare beneficiaries. Such a conclusion should be reported immediately to the Texas State Board of Medical Examiners and to the hospital where the physician has staff privileges.

19. That sanctions be recommended only if the physician cannot or will not practice safe, therapeutic medicine.

20. That physicians under review by the PRO be encouraged to document their positions on quality issues through the use of medical experts, articles, textbooks, and other sources when challenged by PRO reviewers.

21. That prior to recommending sanctions to the OIG, TMF should provide: (a) a detailed statement or list of the charges or deficiencies; (b) adequate notice of the right to a hearing and a reasonable opportunity to prepare for the hearing; (c) an impartial panel of physicians practicing in a setting similar to that of the reviewed physician to conduct the hearing in a fair, objective, and independent manner pursuant to established rules; (d) clearly defined procedures for conducting the hearing to the physician under review in advance of the hearing; (e) that the applicable standards or level of care be established by expert witnesses, recognized medical textbooks, and other credible evidence, not by a panel member but by another person who would be charged with presenting the case leading to a TMF sanction recommendation; (f) an opportunity to hear and see all the evidence presented to the panel and respond to it with witnesses and other credible evidence; and (g) that the hearing body render a decision based on the evidence produced at the hearing.

22. That TMA should coordinate the involvement of county medical societies in the screening and selection of physician advisors and members of the Regional and State Quality Assurance Committees.

23. That TMA should work closely with TMF in recruiting qualified and capable physician advisors, especially in rural areas.

24. That TMA should develop explanatory materials on PRO quality and utilization review.

25. That TMA should be actively involved and assume a leadership role in coordinating and providing relevant continuing medical education according to needs identified in the PRO process, including chart preparation courses.

26. That appropriate TMA councils and committees should review the set of deficiencies identified by TMF reviewers, and consider development of *very practical, very specific* programming (eg, charts, documentation) both at the annual TMA meeting and regionally throughout the year.

27. That TMA should work with county medical societies and others to develop a cadre of consultant-specialists throughout the state who would be willing to serve as preceptors for physicians in various regions.

28. That TMF should be aware of the need for physicians to attain continuing medical education that suits their specific learning mode and needs, and of situations in which patients would be denied access to care if the physician could not undertake CME close to home.

29. That TMF should consider corrective action approaches (as opposed to sanctions) whenever possible, unless there is imminent danger to patients.

DONNA B. JONES
News Editor, *Texas Medicine*

Feature

Wrap-up, part 1: The 70th Texas Legislature

The 70th Texas Legislature adjourned June 1 at midnight, only to be brought back by a special call of Gov William P. Clements, Jr, the next morning to complete a delicately negotiated compromise on tort and insurance reforms, which had met a ceremonious death by filibuster in the closing hours of the session. The compromise included an agreement to address specific medical liability issues in the June 22 special session to consider appropriations and revenue measures. A subsequent issue of Texas Medicine *will report the outcome of "part 2" of the deliberations.*

TMA reviewed 430 different bills that directly or indirectly affect patient and medical care. This article reviews some of the more prominent issues by subject area, and outlines the generic tort and insurance measures passed by the legislature.

Tort reform

The tort reform legislation before Governor Clements will:

—Limit prejudgment interest, which currently is unrestricted. Prejudgment interest will not begin until 180 days after a lawsuit is filed or notice of the claim is made to the defendant. Interest will be at a simple rate, rather than compounded.

—Limit punitive damages, which currently are unrestricted, to $200,000 or four times actual and noneconomic damages, whichever is greater.

—Limit joint and several liability to above 20%. Currently, a defendant who is even slightly responsible for an injury must pay the entire award if codefendants can't pay their share.

—Limit comparative fault. Under the new legislation, the plaintiffs in product liability cases must bear less than 60% of the responsibility for their injuries in order to collect damages from the manufacturer. In other types of negligence cases, the burden remains the same, and the plaintiffs have to prove that they are less than 50% responsible for their own injuries in order to collect damages. When plaintiffs are not involved in causing their own injuries, they must show that a defendant is more than 10% responsible for the injuries before the defendant can be held liable for paying damages of codefendants who are insolvent. If the plaintiffs are partially responsible for the injury, they must show that a defendant is more than 20% responsible for the injury in order to hold the defendant responsible for paying damages of codefendants who are insolvent.

—Require that suits be well grounded in fact, and it provides sanctions for failure to do so.

—Indemnify physicians and psychologists contracting with The Texas Department of Health, the Texas Department of Corrections, and the Texas Youth Commission. It also will extend to psychologists the indemnifications previously provided for physicians contracting with the Texas Department of Mental Health and Mental Retardation and Texas Rehabilitation Commission. The act also provides that public servants, including those contracting with the above state agencies, are not personally liable for damages resulting from acts incurred under their contract. Employees of state agencies, institutions, or departments are not personally liable for acts committed within the scope of their duties. Other provisions of the legislation address charitable immunity and venue shopping.

Only one provision of the tort package directly affects medical liability insurance rates—prejudgment interest. To stabilize rates, the legislature must limit certain economic and all noneconomic (pain and suffering, loss of consortium, etc) awards. Texas' 1977 law provided an absolute cap on economic and noneconomic awards, excluding medical, hospital, and custodial costs, which are tied to the consumer price index. As currently indexed, that partial cap is set at approximately $900,000. Texas' medical liability carriers argue that rendering the 1977 partial caps constitutional, and therefore predictable, would help stabilize rates. At press time, TMA was mounting a statewide campaign focused on the Senate (since the House already has passed this measure) to assure support from 21 out of 31 senators for the proposal during the special session scheduled to begin June 22. Senate approval would allow the proposal to be submitted to voters for approval at the next general elections.

Allied health/limited license providers

Legislation by psychologists who seek mandatory hospital staff privileges was defeated. Legislation by optometrists to allow independent use of diagnostic drugs was similarly defeated, and efforts by physical therapists who seek independent practice also failed. TMA worked with the Texas Orthopedic Association in defeating legislation that would have included podiatrists in the Texas Crippled Children's Act, but worked with podiatrists in clarifying their role in health maintenance organizations and in certifying disabilities limited to the scope of their license. TMA worked with the Texas Academy of Family Physicians and the Texas Radiologic Society in drafting compromise legislation that allows physicians to delegate to noncertified personnel certain radiologic procedures and operation of x-ray equipment. TMA worked with the Texas Association of Obstetricians and Gynecologists on more restrictive laws regarding lay midwifery.

Sunsetted agencies

The Texas Society of Psychiatric Physicians successfully negotiated a modification to the requirement that the commissioner of the Texas Department of Mental Health and Mental Retardation be a physician. The measure retains clearly defined medical control of all mental health programs. The Texas Department of Human Services board was expanded from three to six members. The TDHS medical care advisory committee will be allowed to "comment on and assist in the development of" regulations prior to their adoption by the board, and the department will be required to adhere to due process standards when conducting Medicaid fraud and abuse hearings.

Public health

TMA collaborated with a number of organizations to ensure adequate funding of public and indigent health programs. This issue is expected to be resolved during the special session beginning June 22. TMA supported legislation that limits liability exposure for physicians who contract with the State Department of Health, as well as legislation providing charitable immunity to nonprofit organi-

zations. TMA provided leadership and technical support to legislation that will provide for mandatory AIDS testing under specified conditions, protect the confidentiality of blood donors and protect donors from liability, and provide for confidentiality and immunity when reporting test results inside the medical community. TMA worked with a number of groups in ensuring passage of legislation that will provide for insurance coverage of mammography screening. TMA-supported legislation to reinstate Texas' motorcycle helmet law was never brought to the House floor for debate.

Maternal and child health
Approved legislation prohibits late-term abortions except when significant abnormalities exist or the life or health of the mother is at risk. Most importantly, it provides for enforcement through the State Board of Medical Examiners, rather than through the criminal justice system, as initially proposed.

Medical education
The funding issues regarding Texas' medical schools remain unresolved and will be considered in the special session. TMA will work with the medical education institutions to ensure adequate funding. A proposal to mandate continuing medical education as a condition of relicensure was not considered during the regular session.

Socioeconomic/reimbursement issues
TMA worked with a wide range of coalitions and professional organizations in opposition to expanding the tax base to include professional services and submitted written testimony in special hearings on this issue, which is expected to resurface as part of a tax plan during the June 22 special session.

Drugs/alcohol
TMA opposed legislation that authorized physicians to use drugs without any kind of Food and Drug Administration approval. TMA supported legislation that would authorize the Texas Department of Health to create a negative formulary of those foreign prescriptions that are subject to abuse by the ultimate user and are being prescribed in a nontherapeutic fashion. A county medical society could petition the Texas Department of Health to include drugs or classes of a drug in the negative formulary.

Details on issues addressed in this article are available from the TMA Division of Public Affairs, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

Prepared by the TMA Division of Public Affairs.

AIM HIGH

PHYSICIAN SPECIALISTS.

The Air Force can make you an attractive offer—outstanding compensation, better working hours plus opportunities for professional development. You can have a challenging practice and time to spend with your family. Find out what the Air Force offers a specialist up to age 58. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 784-3132 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE

"He flourished during the first half of the 20th century."

The American physician isn't extinct. But your freedom to practice *is* endangered. Increasing government intervention is threatening the quality of medicine—and your right to function as an independent professional. The government, responding to cost containment pressures from myriad sources, has taken a more active role in legislating reimbursement methods, payment levels and even access to care.

In your fight for survival, the American Medical Association is your best weapon. The AMA is the most influential force in health care. No other organization can so effectively reach the national policymakers who will help determine your future and the future of medicine.

Join the AMA. We're your voice in Washington. And we're fighting for you—and your patients.

For more information, call the AMA collect (312) 645-4783, or return this coupon to your state or county society.

The American Medical Association

535 North Dearborn, Chicago, Illinois 60610

Please send me membership information.

Name _____

Address _____

City _____ State _____ Zip _____

County _____ ☐ Member, County Medical Society

14-042

Feature

Airborne odyssey: Touring Texas for tort reform

Tort reform has been the focus of Texas Medical Association's activities throughout the recently completed regular session of the Texas Legislature. In support of this important effort, association representatives took medicine's story to the public through editorial board tours designed to educate the state's newspaper editors and reporters about proposed tort reform legislation. Although the measures still were pending at press time, the tour already had been labeled a success not only because it generated a stockpile of favorable publicity, but also because it made TMA leadership more visible to members throughout the state.

Following are an overview of editorial tour activities and personal observations from TMA's 1986–1987 President Jim Bob Brame, MD, who participated in most of the trips.

Tort reform has come to the fore as physicians have sought relief from skyrocketing professional liability premiums that have caused a marked decrease in access to health care, particularly among the state's indigent population. In support of legislative proposals to improve the tort system, Texas Medical Association representatives embarked in March on a six-week, airborne odyssey to newspaper offices across the state.

Their purposes were to review with editors and reporters the current professional liability climate, emphasizing impacts on patient care, and to generate news stories and editorials in support of tort reform. Their target audiences were not only the public, but also Texas legislators and other opinion leaders.

The editorial tour took TMA staff members and the association's 1986–1987 President Jim Bob Brame, MD, Eldorado, to 41 Texas daily newspapers, where they visited with more than 80 editors and reporters. In many cities, local physicians participated as TMA's team presented medicine's case for tort reform and answered reporters' questions. In addition to the state's major metropolitan newspapers, the editorial tour made stops in offices across the state, spanning north-to-south from Amarillo to Brownsville and east-to-west from El Paso to Orange.

The trips were via a Cessna twin-engine plane that Dr Brame co-piloted on one trip. The flights were not always smooth. Dr Brame recalled a flight between Amarillo and Lubbock in 40-miles-per-hour winds and another flight during which the passengers and pilots "bounced around the sky between Waco and Austin . . . . the wind was so strong that we had to develop sea legs. It was difficult just walking out of the airplane."

However, all the flights ended with safe landings, after which the editorial team would confer with representatives of local newspapers. The team came armed with statistics, definitions, and other information in a media packet that many editors complimented. Local physicians provided home-town perspectives on how the professional liability situation has affected patient care. The team also was armed with a "secret weapon"—Dr Brame, whose knowledge and personable manner provided a significant advantage.

The tour was well received by the newspapers. Most of them followed through with news stories and editorials supporting all or some of the proposed tort reforms. Dr Brame observed, "A lot of the (the newspaper representatives) didn't even know what tort reform was all about. And, they certainly didn't have any idea about how (the professional liability crisis) affects medical care in Texas.

"They didn't know the cost of defensive medicine or that nearly 20% of obstetricians/gynecologists have dropped obstetrics. And, I think our visits really brought it home to them, particularly when that doctor from the local community could come up and say, 'Since X hospital closed its OB service because of liability, we've had five babies come into the emergency room of that hospital dead . . .'"

The editorial tour brought several opportunities for Dr Brame to discuss tort reform on local television programs.

Dr Brame pointed out another benefit from the tour. "The greatest thing that came out of the tour was the visibility of TMA—members seeing the association in their own home town doing something for them."

TMA staff reports that the tour established and/or reaffirmed liaison and credibility with news and editorial staffs statewide that will provide the basis for future visits or local editorial inquiries.

Dr Brame returned from the tour convinced that such efforts "have to be part of our ongoing communication program. . . . Whether we get our whole package of tort reform, it has proved that because of the size of our state, it takes a team approach to travel and talk to our constituents. . . . Secondly, in order to develop the best representation, we have to get out there among our constituents. It's more than just going to the county medical societies and speaking. It's trying to see the doctors and understand the problems in their own home towns."

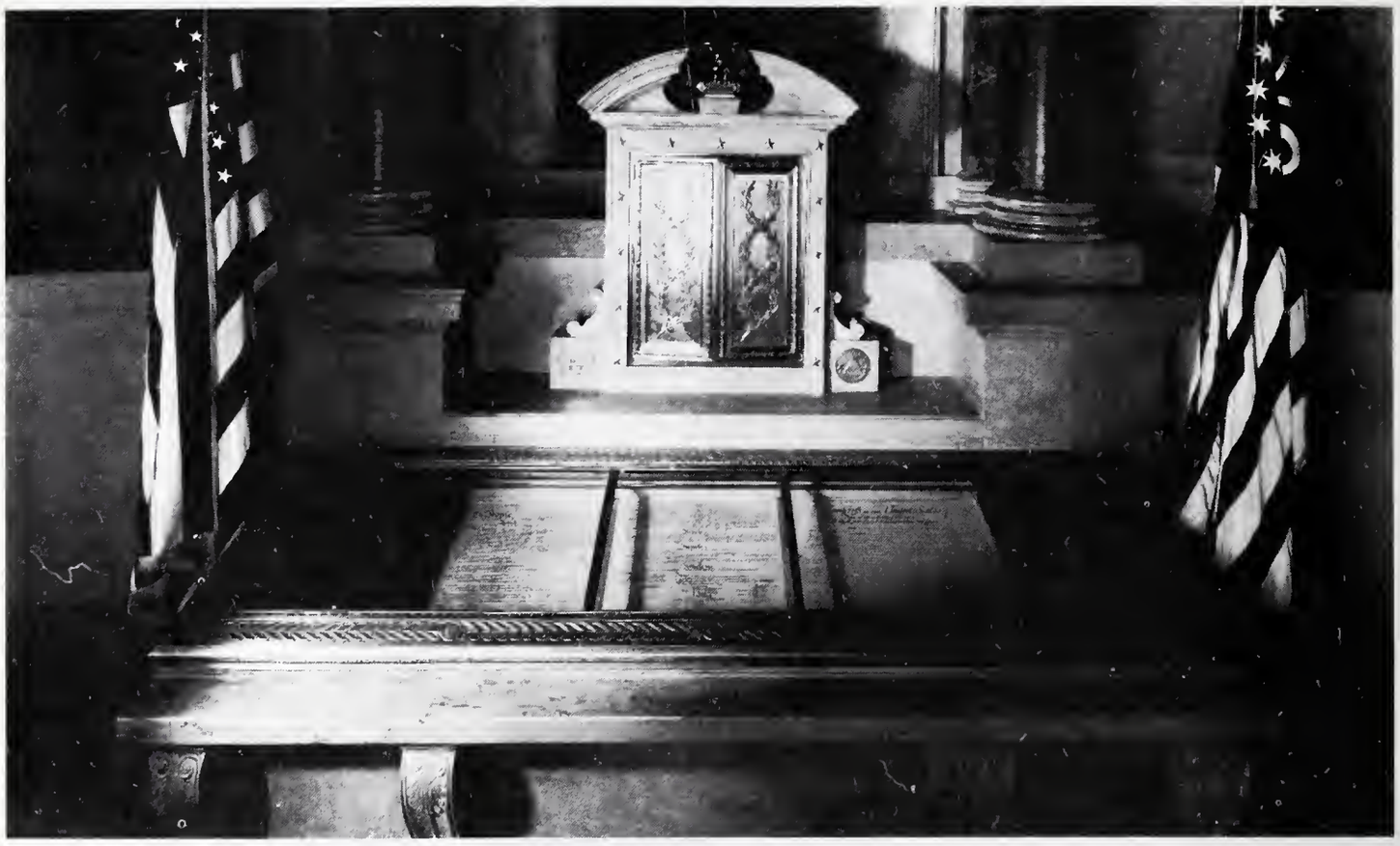
DONNA B. JONES
News Editor, *Texas Medicine*

Jon Hornaday, (left) TMA's director of communication, confers with Dr Brame during a flight.

Kim Ross, (left) director of TMA's Division of Legislative Affairs, stays in touch with Austin while Dr Brame reviews coverage of the editorial tour. Dr Brame recalls, "Wherever we landed, Kim Ross could find a telephone. We could be in Podunk Hollow, Texas, and he'd find a pay phone to call back to Austin."

THE PRESIDENT DOESN'T TAKE AN OATH TO DEFEND THE AMERICAN FLAG OR THE STATUE OF LIBERTY.

The President takes an oath to defend something even more important than a majestic symbol of our country.



The President takes an oath to defend the Constitution of the United States. A document that has been described as the greatest leap forward for freedom in human history. A document that is the foundation of our country. And the means by which we achieve the rule of law and protect our freedom.

As we commemorate the Bicentennial of the Constitution, there is no better way for you as an American to reaffirm the principles for which our country stands than to learn more about the Constitution.

The words we live by.

THE CONSTITUTION

The words we live by

To learn more about the Constitution write: Constitution, Washington, D.C. 20599. The Commission on the Bicentennial of The U.S. Constitution.

Ad Council

Texas Medici

Consent for medical treatment

"Every human being of adult years and sound mind has a right to determine what shall be done with his own body; and a surgeon who performs an operation without his patient's consent commits an assault, for which he is liable in damages. This is true, except in cases of emergencies where the patient is unconscious, and where it is necessary to operate before consent can be obtained" (1). This principle, set forth by the renowned jurist Judge Benjamin Cardozo in the case of Schloendorff v Society of New York Hospital *in 1914, recited what is still the law today in Texas: a physician may not operate on or otherwise treat a patient in circumstances other than emergencies unless he obtains the consent of the patient, if competent, or, if the patient is incompetent, of someone who is legally authorized to give the requisite consent (2).*

Much emphasis of late has been placed on the informed consent doctrine, which describes the physician's duty to inform his or her patient of the facts deemed necessary to formulate an intelligent decision regarding consent to treatment. In Texas, the Texas Medical Disclosure Panel, created by statute in 1977, is charged with examining all medical treatments and surgical procedures and identifying them as to whether they require written disclosure of their risks and hazards (3). Treatments and procedures that do not require written informed consent still require consent that is either express, as voiced by the legally authorized party, or implied, as in emergencies. The following article examines case and statutory law regarding the fundamental concept of consent in Texas noting who may give consent and when consent must be express or implied.

As early as 1920, Texas courts were citing Judge Cardozo's opinion in *Schloendorff v Society of New York Hospital* in holding that a physician is liable for operating upon a patient without obtaining the consent of either the patient or someone legally authorized to give consent, if the patient is not competent to do so. In *Moss v Rishworth* (4), William H. Rishworth sued physicians Robert E. Moss and Lewis K. Beck for performing an operation to remove the diseased tonsils and adenoids of Rishworth's daughter Imogene without his permission. Imogene's adult sister Clara, a nurse in training, took the child to Dr Moss for an examination to ascertain whether an operation was needed for the removal of Imogene's adenoids since the child was experiencing difficulty in breathing and was subject to attacks of rheumatism. The examination disclosed badly diseased tonsils and the appearance of adenoids, which caused Dr Moss to inform Clara that an operation was necessary. Having agreed upon a date for the operation, Imogene returned with Clara, as well as another sister training to be a nurse. Imogene's tonsils and adenoids were removed, but before coming out from under the influence of the anesthetic, Imogene died. In finding for Imogene's father, the court considered whether the sisters, as temporary custodians, (it was acknowledged that William Rishworth had placed Imogene in the care of her sister Clara), had the right to consent to the operation or whether the physicians' act in performing the operation was justified regardless of the parent's consent because the paramount interest of the child demanded the operation. The court concluded that as temporary custodians of Imogene, her sisters had no authority to give consent. The court also concluded that although there exists an exception to consent if a patient's injuries require prompt surgical attention for the preservation of life and limb, in Imogene's case it was not emergent in the sense that death likely would result immediately upon failure to perform the operation.

Consent for treatment of minors

Today, just as in 1920, if a minor (a person under 18 who has never been married and who has not been declared an adult by a court [5]) requires medical attention, a physician should obtain the consent of the child's parents in most cases. The law vests almost exclusively with "the parent" of a child the power to consent to medical, psychiatric, and surgical treatment of the child (6). The law is phrased in such a way that consent to a minor's treatment appears to be needed from only one parent.

In regard to children of divorced parents, the managing conservator (the parent who has custody of the child during the week) retains all powers of a parent to the exclusion of the other parent, subject to the weekend parent's rights as a possessory conservator (7). By law, the possessory conservator has only the power to consent to medical and surgical treatment during an emergency involving an immediate danger to the child's health and safety (8). Therefore, the managing conservator is the person from whom a physician must obtain consent to treat a child of divorced parents. The possessory conservator's power to give consent to emergency treatment for his or her child may be illusory since a physician may render medical treatment without consent in an emergency that threatens life or limb.

A Texas appeals court defined the treatment to which a parent or other legally authorized person may consent on behalf of a child in *Little v Little* (9). This case dealt with whether the mother/guardian of a 14-year old girl suffering from Down's syndrome could consent for her daughter to donate one of her kidneys to her brother suffering from endstage renal disease. The court stated that the power of parents, managing conservators, and guardians to consent to surgical intrusions upon a minor or ward is limited to the power to consent to medical "treatment." The court, quoting a legal dictionary, stated that such "treatment" is limited to "the steps taken to effect a cure of an injury or disease . . . including examination and diagnosis as well as application of remedies." The court noted that the definition of "treatment" would not encompass

Medicine and the Law articles are intended to help physicians understand the law by providing legal information on selected topics. This article is published with the understanding that Texas Medical Association is not engaged in providing legal advice. When dealing with specific legal matters, readers should seek assistance from their own attorneys.

a nephrectomy, but allowed the mother to consent on the grounds that her daughter would receive psychological benefits. If the case law definition of "treatment" is taken literally, it is arguable that a parent could not consent to some types of cosmetic surgery. However, case law discussions of what constitutes "treatment" to which a parent can consent usually occur in regard to organ donation or sterilization, not cosmetic surgery.

As noted above, the law vests the power to consent to treatment of a minor almost exclusively with a parent. However, the law allows consent by minors to medical, surgical, hospital, and dental care under certain conditions or circumstances. A minor may consent if he or she (a) is on active duty with the armed services of the United States, (b) is at least 16 years old and resides separate and apart from his or her parents, managing conservator, or guardian, with or without their consent (and regardless of the duration of such residence), and is managing his or her own financial affairs, (c) consents to diagnosis and treatment of any infectious, contagious, or communicable disease that the law or an applicable regulation requires the physician or dentist to report to a local health officer, (d) is unmarried and pregnant and consents to hospital, medical, or surgical treatment other than abortion related to her pregnancy, or (e) consents to examination and treatment for drug addiction, drug dependency, or any other condition directly related to drug use (10).

Also, by statute, any of the following persons may consent to medical treatment of a minor when the person otherwise having the power to consent cannot be contacted and that person has not given actual notice to the contrary: a grandparent, an adult brother or sister, an adult aunt or uncle, any court having jurisdiction of the child, any adult responsible for the care and control of a minor under the jurisdiction of a juvenile court, the Texas Youth Commission for any minor committed to it when the person having the power to consent has been contacted and an educational institution in which the minor is enrolled or any adult who has care and control of the minor and written authorization to consent from the person having the power to consent (11).

However, as indicated in *Moss v Rishworth*, if medical treatment is needed for the immediate preservation of life or limb of a child, then such attention should be given immediately regardless of whether consent has been received. Naturally, the appropriate staff should continue efforts to notify the correct party and secure consent.

Sometimes a physician may face the problem of parental refusal for treatment of a minor's health problem, which although not immediately life threatening still necessitates prompt treatment. Such a scenario presented itself to the court in *Mitchell v Davis* (12). In this case, the child had been denied medical treatment because his mother had rejected orthodox medical treatment and believed in divine healing and the power of religion to overcome all physical ailments and disease. The court awarded custody of the young boy, who appeared to be suffering from arthritis or complications following rheumatic fever, to the local authority in charge of juveniles so that medical treatment could ensue. The court held that the minor was a neglected child and stated,

> . . . while ordinarily the natural parents are entitled to the custody and care of their child, this is not an absolute unconditional right. The State has such an interest in the welfare of its citizens as will authorize the enactment of suitable legislation by which the state may assume the custody of children and the parents may be deprived of the custody thereof where the parents abandon the children or neglect them in such manner as to cause them to become a public charge, or where the parents otherwise prove to be unsuitable.

Should a physician encounter a situation that is not an emergency but requires that prompt medical attention be given a child, then the physician should determine whether the need for treatment is such that he or she should contact the county welfare unit (13).

Consent for treatment of adults

Just as in the case of minors, Texas courts have recognized that a surgeon is subject to liability for assault and battery if he operates without the consent of an adult patient or the person legally authorized to give such consent unless there is an emergency. In *Gravis v Physicians and Surgeons Hospital of Alice* (14), Mrs Gravis went to the emergency room Oct 22, 1963, complaining of pain in her abdomen. She was examined, but no conclusions were reached as to the probable cause of her complaints. She was given medication and hospitalized. On Oct 24, 1963, Mrs Gravis' blood count was up and x-rays taken that morning showed some dilation of the small intestine. Her physician concluded that an exploratory operation was necessary. An intestinal obstruction was found and corrected, but as a result, Mrs Gravis suffered from a number of physical disabilities including bladder trouble, phlebitis of the left leg, and partial paralysis. She sued the hospital and medical personnel stating she had not given her consent to such an operation. The issue of whether Mrs Gravis gave her consent was disputed. However, a lower court affirmed the trial court in granting a summary judgment to the hospital and medical personnel on the basis that Mrs Gravis' consent was not necessary because an emergency existed and because Mrs Gravis was under the influence of drugs to such an extent that she was incapable of giving consent. The Texas Supreme Court reviewed the surgeon's affidavit in support of the summary judgment. The surgeon stated, "There was no dire emergency, and she was operated on as soon as the operating room was available." The surgeon explained that he meant "immediate" when he said "dire," and the court concluded that there was ample time to discuss the operation with Mrs Gravis and give her the opportunity to consent to or refuse the same.

An interesting point to note in the Gravis case was that Mr Gravis consented in writing to the performance of whatever treatment or operation and the administration of whatever anesthetics the physician believed to be necessary or desirable for Mrs Gravis. Although there was no contention in the lawsuit that Mr Gravis was authorized by his wife to consent on her behalf, the court did comment that the relationship of husband and wife does not in itself make one spouse the agent of the other. Another court in *Jeffcoat v Phillips* (15), a case

wherein the plaintiffs, the Jeffcoats, sued Dr John R. Phillips for alleged unauthorized surgery upon Mrs Jeffcoat, held that a husband's consent was not needed for a wife's operation. The court stated that a person does not fall within the classification of property and, as such, a person has the right to consent to an operation if he or she chooses to do so without the consent of a spouse. Thus, questions regarding whether there is a need for spousal consent for the performance of sterilization procedures or abortions are answered in the negative by the Jeffcoat decision.

Conclusion

Obtaining consent is extremely important to avoid allegations that the patient did not authorize a treatment or procedure. Ascertaining who is the proper person to consent is equally as important. To avoid problems in identifying the proper person to consent to treatment, a physician should encourage a minor patient's parents to delineate clearly who may consent for treatment of their child if they can not be reached so that the physician may proceed to render care promptly. Also, a physician may wish to encourge an adult patient to designate guardianship before the need arises so that the patient's wishes regarding treatment may be carried out by someone the patient feels knows his wishes (16). However, the obtaining of consent never should stop a physician from rendering aid in emergencies to those who can not give consent due to incompetency.

HELENE A. ALT, JD
TMA Assistant General Counsel

REFERNECES

1. Schloendorff v Society of New York Hospital, 211 NY 125, 105 NE 92 (1914).
2. 42 Tex Jur 3d Healing Ats and Institutions, sec 146 (1985).
3. Tex Rev Civ Stat Ann, art 4590i, sec 6.04 (Vernon Supp 1987).
4. Moss v Rishworth, 222 SW 225 (Tex Comm'n App 1920).
5. Tex Fam Code Ann sec 11.01 (Vernon 1986).
6. Tex Fam Code Ann sec 12.04 (6) (Vernon 1986).
7. Tex Fam Code Ann sec 14.02 (a) (Vernon 1986).
8. Tex Fam Code Ann sec 14.04 (a)(3) (Vernon 1986).
9. Little v Little, 576 SW2d 493 (Tex Civ App—San Antonio, 1979, no writ).
10. Tex Fam Code Ann sec 35.03 (Vernon 1986). See also Young MG: Treatment of minors—consent requirements. Tex Med 79:72–74, 1983.
11. Tex Fam Code Ann sec 35.01 (Vernon 1986).
12. Mitchell v Davis, 205 SW2d 812 (Tex Civ App—Dallas, 1947, writ ref'd).
13. Wilcox DP: Abuse of the elderly and children—the physician's role in detection and prevention. Tex Med 79:74–75, 1983.
14. Gravis v Physicians and Surgeons Hospital of Alice, 427 SW2d 310 (Tex 1968).
15. Jeffcoat v Phillips, 417 SW2d 903 (Tex Civ App—Texarkana, 1967, writ ref'd nre).
16. Tex Prob Code Ann, sec 118A (Vernon Supp 1987). See also Young MG: Withholding and withdrawing medical care—1986 update. Tex Med 82:67–70, 1986, and Young MG: The Texas Natural Death Act—1985 amendments. Tex Med 81:65–68, 1985.

HELP YOUR COLLEAGUES HELP THEMSELVES

It's a fact. A shortage of funds can prevent an impaired physician from getting the help he or she needs and wants.

The Physician Health and Rehabilitation Assistance Fund was established by the Texas Medical Association Committee on Physician Health and Rehabilitation primarily to provide assistance to impaired physicians who cannot afford treatment for substance abuse or other problems.

Financial assistance is provided in the form of a loan, with funds usually sent directly to providers of care.

Please help TMA help your colleagues. Support the TMA Physician Health and Rehabilitaton Assistance Fund. Your contribution is tax deductible.

If you would like to know more about how the fund assists indigent, impaired physicians, call TMA at 512/477-6704, ext. 141.

TMA PHYSICIAN HEALTH AND REHABILITATION ASSISTANCE FUND

I want to support the Physician Health and Rehabilitation Assistance Fund. Enclosed is my tax deductible contribution in the amount of:

_____ $25 _____ $100

_____ $50 _____ $ _____

Name _____

Address _____

_____

_____

Please return this form to: Texas Medical Association, Physician Health and Rehabilitation Assistance Fund, 1801 North Lamar Blvd., Austin, Texas 78701.

Competition: how to meet it

With more physicians coming out of the medical education pipeline, competition is increasing.

Patient visits are down. Is this caused by recession or by changes in patients' medical habits?

Fees are becoming fixed, reduced, and negotiated.

The outlook, as they say, isn't exactly rosy. Yet we find that some physicians seem to be faring better than others. These more fortunate practitioners have some common threads of practice performance that seem to enhance their net results.

Here are some of the things that can be done internally, in-house, to improve your marketing and help you compete effectively:

1. *Quality of your personnel.* Front office employees are the first and last point of contact with your patients. If they put patient telephone callers on hold, don't listen carefully to patient-stated problems, don't make appointments that are convenient to the patients' schedules, and are too aggressive in collections—you will pay for those discourtesies. Patient satisfaction surveys pinpoint that dissatisfaction with your personnel is the patients' third greatest concern, after physician communications and fees. We believe that all medical office personnel should be educated to the fact that their salaries really come from patients; therefore, their real employers are satisfied patients.

Consequently, employees should be carefully screened and selected to determine their communications skills and capacity for empathy. In our consulting work we have observed that the supposedly "tough but skilled" nurse turns patients away. The physician may overvalue technical competence, to the detriment of patient returns.

One important measure of the competence of the new employee who answers the phone and makes appointments is the "no-show" rate. If your "no-shows" increase, it specifically points to weakness with the telephone/appointment scheduling employee.

2. *Appearance of the practice.* We all judge a house, a building, an office, a reception room, and people, based upon our first 15 seconds of visual contact. So do your patients. Therefore, your reception room conveys important messages to your patients, especially new patients. We recommend the use of a professional, commercial decorator to provide a professional appearance to your reception room, and an overall "look" for your business offices, examination rooms, and hallways.

The reception room should have good lighting, carpeting, music (to screen out the front desk receptionist's conversation), and current magazines. It could employ subdued colors (beiges and browns). If the physician has won awards, commendations, or community service plaques, these should be displayed in the reception room. Patients like to deal with award-winners and community-involved professionals. One obstetrics-gynecology practice, for example, displays photos and plaques of the Little League teams (boys and girls) that the physician has coached. Patients look at the pictures to try to spot their own or their neighbors' children. It is a definite patient-pleaser.

We think carpeting should be used throughout most of the practice area. It provides a good appearance, helps soundproof, and is easy to maintain.

Diplomas should be displayed in the hallways. They are more likely to be seen there than in the physician's office.

Employees can help the appearance of a practice. Uniforms minimize clothing competition among employees, and many attractive uniforms, such as blazer outfits, are available. In fact, we recommend that uniforms and/or lab coats be worn by all staff as well as by the physician.

Name tags with job titles help patients identify who they are dealing with. Doctors' uniforms could have their names sewn on, if badges get in the way. This gives the physician another way to have his or her name seen by the patient. Repetition helps them remember you!

3. *Doctor/patient communication.* The "too busy" physician of the 1960s and 1970s was forced to spend less and less time with the patient. This resulted in habits that most physicians find difficult to break.

The number one complaint voiced in most patient surveys is, "The doctor didn't spend enough time with me." I was at one practice where the physician was only seeing 15–20 patients per day, but was still rushing in and out of examination rooms as if he were seeing twice that number.

Extend your time with patients. One way is to avoid putting the patient's medical chart between you and the patient. Try to sit at an equal eyeball-to-eyeball level, especially on the first visit.

Listen to the patient, and maintain eye contact. After the patient has provided the problems and/or complaints, ask permission to write notes in the chart. If you dictate, dictate your findings in the patient's presence. You are now repeating your findings, extending your time with the patient, and bringing the patient into your medical art form.

Many physicians always ask the patient, "Is there anything else you want to bring to my attention?" This tells the patient you are not in a hurry, and that you are thorough.

As you proceed with your examination, try to explain what you are doing and what you are looking for. Patients like to be informed and treated as intellectual peers. It flatters them, and you display your medical thoroughness.

These three checkpoints—personnel, appearance, and doctor/patient art form—offer three major opportunities for improving your in-office marketing with patients, and gives your practice a competitive edge.

GEORGE S. CONOMIKES
President, Conomikes Associates, Inc, 4270 Promenade Way, Marina del Rey, CA 90292.

This article has appeared in the *LACMA Physician*, journal of the Los Angeles County Medical Society, and is reprinted with permission.

P.A. Arauzo

P. Arturo Arauzo, MD, 69, died April 17, 1987.

Dr Arauzo was born in Peru and had been a Keene, Tex, resident for 16 years. He was a psychiatrist at Huguley Memorial Hospital in Fort Worth for the past ten years and had previously practiced in Austin, Tex.

Dr Arauzo received his premedical education at Andrews University in Michigan and in 1961 received his medical degree from the University of Nuevo Leon in Monterrey, Mexico. He served an internship at Washington Sanitarium and Hospital in Takoma Park, Md, and a residency at Austin State Hospital.

Surviving family members include his wife, Luz Arauzo, Keene; son, Arturo C. Arauzo, MD, Mesquite, Tex; daughters, Nilsa Johnson, Keene, and Lyris A. Arauzo, Dallas; three brothers; two sisters; and one grandchild.

J.V. Dindot

James V. Dindot, MD, a Conroe anesthesiologist, died March 22, 1987, at age 53.

Dr Dindot was born in Paulding County, Ohio. He was a 1954 graduate of Defiance College in Ohio and a 1958 graduate of Ohio State University College of Medicine. He remained in Ohio for an internship and residency in Columbus. He practiced anesthesia there until 1978. Dr Dindot then practiced in McAllen, Tex, and in Oklahoma City, Okla, before moving to Conroe in 1982.

Surviving family members include his wife, Jacqueline Dindot, Conroe; daughters, Deborah Lyon, Houston, and Rebecca Dindot and Susan Dindot, both of Conroe; and sons, James Dindot II and John Dindot, both of Conroe.

S.R. Gibson

Stephen R. Gibson, MD, 37, Houston, died Feb 25, 1987.

Dr Gibson was born in Miami, Okla, and was a 1975 graduate of the University of Pennsylvania School of Medicine. His internship and residency were at St Mary's Hospital and Medical Center in San Francisco. Dr Gibson began a practice of internal medicine in Houston in 1979.

Surviving family members include his parents, Mr and Mrs Alfred D. Gibson, Sunrise, Fla, and brother, John Gibson, Tamarac, Fla.

R.B. Gilliam

Rochell B. Gilliam, MD, a retired Victoria family physician, died March 8, 1987. He was 69.

Born in Hood County, Texas, Dr Gilliam was a 1951 graduate of The University of Texas Medical Branch at Galveston. Following an internship at John Sealy Hospital, Dr Gilliam moved to Victoria to begin a family practice.

Dr Gilliam served in the 13th Air Force and saw duty in the South Pacific. He was awarded the Distinguished Flying Cross, three Oak Leaf Clusters, and the Air Medal.

He is survived by his wife, Pattie Dodson Gilliam, MD, Victoria; daughters, Constance Gilliam McDougal, Victoria, and Mary Jane Helm, Corpus Christi, Tex; sons, Robert M. Gilliam, MD, Victoria, and Daniel Fraine Gilliam, Houston; sisters, Edna Winn, Taft, Tex; Oleta Kelly, Granbury, Tex; and Mrs William T. Moore, Bryan, Tex; brother, J.U. Gilliam, Refugio, Tex; and five grandchildren.

W.C. Hill

Wayne Calvin Hill, MD, 83, a retired physician who had practiced in the Brownfield, Tex, area for 40 years, died March 3, 1987.

Dr Hill was a native of Maryville, Tenn. He was a graduate of the Southern College of Pharmacy in Atlanta. In 1937 he received his medical degree from the University of Tennessee School of Medicine. After an internship in Washington, DC, and Birmingham, Ala, Dr Hill served in the US Army Medical Corps. He moved to Brownfield in 1940.

Surviving family members include his wife, Marie Hill, Brownfield; son, Randy Hill, Denver; daughter, Sindy Evans, Clackamas, Ore; brother, Raymond Beacher, Alcoa, Tenn; sister, Winnie Burr Underwood, Lewisville, Tenn; and four grandchildren.

S.A. Levy

Samuel A. Levy, MD, a retired Houston physician, died March 20, 1987.

Dr Levy, 68, was born in Birmingham, Ala, and attended Howard College there. In 1942 he graduated from Washington University School of Medicine in St Louis, Mo. After an internship and residency, he moved to Houston, where he was a longtime general practitioner and internist and one of the founders of Park Plaza Hospital.

Dr Levy is survived by his wife, Janis Levy, Houston; sons, H. Richard Levy and Jonathan D. Levy, both of Austin; Robert A. Levy, Houston; brother, Emil Levy, Sarasota, Fla; and two granddaughters.

R.T. Moore

Raymond T. Moore, MD, a former commissioner of health for the State of Texas, died Feb 4, 1987. He was 67.

A native of Gilbert, Ark, Dr Moore attended Arkansas State Teachers College in Conway. In 1944 he received his medical degree from the University of Arkansas School of Medicine in Little Rock. He served an internship and residency in San Antonio. After gaining a wide range of experience as a private physician, Army doctor, and Public Health Service doctor, Dr Moore joined the Texas Department of Health in 1974 as a deputy state health commissioner. He became commissioner of health in 1978 and served until 1980, when he retired to a family ranch near Edna, Tex.

Dr Moore is survived by his wife, Melba McNeil Moore, MD, Edna; daughters, Rosemary Conlon, MD, Sugarland, Tex; Maureen Slocum and Ranelle Meroney, both of Austin; and Lois Cunning, Crosby, Tex; brother, Carl Moore, DDS, Dallas; sisters, Pearl Jones, Everton, Ark, and Flora Faye Daniels, Santa Clara, Calif; and nine grandchildren.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

P. A. ARAUZO
Keene, 1918–1987

J. V. DINDOT
Conroe, 1933–1987

S. R. GIBSON
Houston, 1949–1987

R. B. GILLIAM
Victoria, 1918–1987

W. C. HILL
Brownfield, 1907–1987

S. A. LEVY
Houston, 1918–1987

R. T. MOORE
Edna, 1919–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audio-visual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student $ 5.00 ☐ Patron $ 100.00
☐ Sustaining $15.00 ☐ Life $1,000.00
☐ Subscribing $25.00

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Asbury AK, McKhann GM, McDonald WI: *Diseases of the Nervous System. Clinical Neurobiology* (2 vols). Philadelphia, W.B. Saunders Company, 1986.

Balkany TJ, Pashley NRT: *Clinical Pediatric Otolaryngology.* St Louis, The C.V. Mosby Company, 1986.

Banks PA, Present DH, Steiner P (eds): *The Crohn's Disease and Ulcerative Colitis Fact Book.* New York, Charles Scribner's Sons, 1983.

Bartlett CLR, Macrae AD, Macfarlane JT: *Legionella Infections.* Baltimore, Edward Arnold, 1986.

Batshaw ML, Perret YM: *Children with Handicaps,* ed 2. Baltimore, Paul H. Brookes Publishing Co, 1986.

Bland JH: *Disorders of the Cervical Spine. Diagnosis and Medical Management.* Philadephia, W.B. Saunders Company, 1987.

Broder S (ed): *AIDS. Modern Concepts and Therapeutic Challenges.* New York, Marcel Dekker, Inc, 1987.

Calkins E, Davis PJ, Ford AB: *The Practice of Geriatrics.* Philadelphia, W.B. Saunders Company, 1986.

Cochlear Implant Devices for the Profoundly Hearing Impaired. National Center for Health Services Research and Health Care Technology Assessment, US Department of Health and Human Services, 1986.

Chung SMK: *Handbook of Pediatric Orthopedics.* New York, Van Nostrand Reinhold Company, 1986.

Cocke WM Jr, White RR IV, Lynch DJ, et al: *Wound Care.* New York, Churchill Livingstone, 1986.

Drash AL: *Clinical Care of the Diabetic Child.* Chicago, Year Book Medical Publishers, Inc, 1987.

Fess EE, Philips CA: *Hand Splinting. Principles and Methods.* St Louis, The C.V. Mosby Company, 1987.

Fish RM, Ehrhardt ME: *Malpractice Depositions. Avoiding the Traps.* Oradell, NJ, Medical Economics Books, 1987.

Fisk JW: *Medical Treatment of Neck and Back Pain.* Springfield, Ill, Charles C Thomas Publisher, 1987.

Fuller JR: *Surgical Technology. Principles and Practice,* ed 2. Philadelphia, W.B. Saunders Company, 1986.

Hill AF: *"I'm a Patient, Too." CanSurmount: The Dynamic Support Program for Cancer Patients and Their Families.* New York, Nick Lyons Books, 1986.

Javadpour N (ed): *Tumor Markers. Biology and Clinical Applications.* New York, Praeger, 1987.

Jenike MA, Baer L, Minichiello WE (eds): *Obsessive-Compulsive Disorders. Theory and Management.* Littleton, Mass, PSG Publishing Company, Inc, 1986.

Kaplan PE, Cerullo LJ (eds): *Stroke Rehabilitation.* Boston, Butterworths, 1986.

Kittle CF: *Current Controversies in Thoracic Surgery.* Philadelphia, W.B. Saunders Company, 1986.

Miller TR: *Evaluating Orthopedic Disability. A Commonsense Approach,* ed 2. Oradell, NJ, Medical Economics Books, 1987.

Nori D, Hilaris BS (eds): *Radiation Therapy of Gynecological Cancer.* New York, Alan R. Liss, Inc, 1987.

Porrath S: *A Multimodality Approach to Breast Imaging.* Rockville, Md, Aspen Publishers, Inc, 1986.

Sanders DR (ed): *Radial Keratotomy. Surgical Techniques.* Thorofare, NJ, SLACK Incorporated, 1986.

Sarti DA: *Diagnostic Ultrasound. Text and Cases,* ed 2. Chicago, Year Book Medical Publishers, Inc, 1987.

Schapiro RT: *Symptom Management in Multiple Sclerosis.* New York, Demos Publications, 1987.

Schiff L (ed): *Diseases of the Liver,* ed 4. Philadelphia, J.B. Lippincott Company, 1975.

Thawley SE, Panje WR (eds): *Comprehensive Management of Head and Neck Tumors* (2 vols). Philadelphia, W.B. Saunders Company, 1987.

Vaughan D, Asbury T: *General Ophthalmology,* ed 11. Los Altos, Calif, Lange Medical Publications, 1986.

Webster DJT: *A Colour Atlas of Mastectomy with Immediate Reconstruction.* Chicago, Year Book Medical Publishers, Inc, 1986.

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2S50 Morgan Avenue, Corpus Christi, Texas 78405
Telephone S12 888-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7SS8

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 7S230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4S01 (24 hours)

DAVID S. PITA, MD

COLON & RECTAL SURGEON
OUT-PATIENT LASER HEMORRHOIDECTOMY

Bowel obstruction from cancer of the colon, volvulus, Crohn's or ulcerative colitis, toxic megacolon, diverticular obstruction, acute or chronic colon bleeding, colovesicle fistula, rectovaginal fistula, rectal fistulas, rectal prolapse, anal incontinence, warts, pruritus ani, rectal abscesses and other rectal conditions.

Emergency consultations and referrals; weekends and evenings.

Privileged at Baylor University Medical Center and Methodist Central Hospital.

214 821-4300, answered 24 hours and weekends
214 341-0859, residence

TMA Forum on Medical Issues

. . . Another service of your associatio

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner

Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism

Practice Limited to Endocrinology & Diabetes

5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service

. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery

DAVID J. ZEHR, MD—Microsurgery

ARNOLD V. DiBELLA, MD

Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA

Diplomates American Board of Orthopaedic Surgery

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops

. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American 8oard of Plastic Surgery

JACINTO ZAMBRANO, MD
Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# S12 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone 817 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation

Baylor Medical Plaza, 3800 Gaston Ave., Suite 303, Dallas, Texas 7S246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 8116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS

Diplomate American 8oard Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7S15 S. Main, Suite 500, Houston 77030; 713 79S-S3S3
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-S353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery

R. Gordon Long, MD, FACS
8ennie 8. Scott, MD, FACS
John V. Coon, MD, FACS
Dinlomates American Board of Neurological Surgery
8aylor Medical Plaza, 60S Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0SS1

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
W. Robert Hudgins, MD
Richard H. Jackson, MD
Mark J. Cwikla, MD
Casey E. Patterson, MD (Retired)

5959 Harry Hines 8lvd., St. Paul Professional 8ldg., Suite 620, Dallas, Texas 7523S; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 90S; Dallas, Texas 7S231; 214 369-7596

1302 Lane St., Copper Tree Medical Center, Suite 300, Irving, Texas 75062; 214 2S9-4768

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American 8oard of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

TMA HealthWise Series
. . . Another service of your association

ARLINGTON ASSOCIATION OF NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
9S0 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4S93

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 770S4

Electroencephalography

EEG service via telephone transmission to hospitals, clinics and private offices.

Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0S40
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0S40

Diplomate American 8oard of Nuclear Medicine

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES
Albert Vaiser, MD
William 8. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
8radley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 7S231; 214 692-6941 or 800 872-2020
3600 Gaston Avenue, Dallas, Texas 7S246; 214 821-4S40

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 7S204
214 521-11S3; 1-800-442-S376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 7820S; S12 226-S191

TMA Action monthly newsletter
. . . Another service of your association

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-800-833-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS
Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD
John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas
77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas
77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

Heights Medical Eye Center, 535 West 20th Street, Houston, Texas 77008;
713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Schubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery

A Professional Association

2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

TMA Physicians Benevolent Fund

. . . Another service of your association

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA
ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

SAN ANTONIO HEAD & NECK SURGICAL ASSOCIATES, PA

Board Certified Otolaryngologists

Julius F. Marlowe, MD
Michael H. Bertino, MD
G. Paul Laursen, DDS, MD, FACS, FAAFPRS
Harry Schilling, MD
Stephen J. Talley, MD

ENT, Facial Plastic Surgery, Lipo-Suction

Madison Square Medical Building, Suite 304, 311 Camden, San Antonio, Texas 7B215; 512 224-5481

Physicians' Plaza, Suite 370, B03B Wurzbach Road, San Antonio, Texas 78229; 512 690-1326

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES
Dorothy Patras, MD

Anatomic Pathology and Consultation in Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone B17 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.
J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8B50 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. Box S8, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD
John E. Lomax, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD
Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

WILLIAM E. BARNES, MD
Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 60B, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 7B229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 7570S; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN

Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery
Jacinto Zambrano, MD

Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES

302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD

Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS

Excellence in Form & Function
Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 558-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

PSYCHIATRY

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child, Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 381-7181

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

Representing TMA's legislative views
. . . Another service of your association

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

TMA Physician Membership Directory
. . . Another service of your association

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS
Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue, Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology
Urology—Adult and Pediatric
3600 Gaston Avenue, Baylor Medical Center Plaza, Wadley Tower, Suite 75S, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS
Diplomate, American Board of Urology
Adult and Pediatric Urology
Impotence with Prosthesis-Vasovasostomy
1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES
Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology
221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

C. F. SKRIPKA, JR, MD, FACS
Urology, Andrology & Neurourology
1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

TMA News Hotline

1-800-252-7003

. . . Another service of your association

What you get back is immeasurable.

Just five hours a week. Just 5% of your income. It's not much to give, to the causes you really care about. But that small investment could change somebody's life. And it's hard to imagine a better return than that.

INDEPENDENT SECTOR
Ad Council

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

West Texas—Big Spring State Hospital. Psychiatrist, child psychiatrist and general physician positions available, board certified or eligible. Texas license required. JCAH fully accredited facility. Excellent benefit package including 40-hour work week, malpractice protection, retirement, and tax-sheltered income program. Beautiful, friendly sunbelt location. City of 25,000 with good schools and excellent housing. Contact Superintendent, Big Spring State Hospital, P.O. Box 231, Big Spring, Texas 79721-0231. 915 267-8216. An EO/AAE.

STAFF PHYSICIANS

The Texas Department of Corrections is recruiting for full-time staff physicians for several locations in East Texas and in the Houston area. M.D. or D.O. degree, with current Texas license.

In addition, a vacancy exists in the Palestine area for a Physiatrist to work with mentally retarded offenders. Applicants must be board eligible or certified with a current Texas license. Experience working with mentally retarded is preferred. Requires the ability to design and implement therapeutic and recreational programs as well as caring for general medical needs.

All facilities are accredited by the National Commission on Correctional Health Care.

Send curriculum vitae or resume to: Personnel, Health Services Area, Tx Department of Corrections, P.O. Box 99, Huntsville, TX 77340; (409)294-2755. EQUAL OPPORTUNITY EMPLOYER

General Physicians—Wichita Falls State Hospital, Wichita Falls, Texas. Population 100,000. Accredited. JCAH. Salary $59,856 to $62,856. Texas medical license. Write Richard Bruner, Superintendent, P.O. Box 300, Wichita Falls, Texas 76307, or call collect 817 692-1220, ext. 213. An equal opportunity/affirmative action employer.

Medical Director—The City of Port Arthur, Texas is seeking a medical director to plan, organize, direct, and supervise all activities of the city's Public Health Department which provides services to 39,000+ clients annually. The health department operates on a budget of approximately $3.2 million and functions with an 83 member staff. Successful applicant must be a practicing physician and possess at least eight years of responsible professional medical experience with two years of supervisory experience in a public health program. A license to practice medicine in the State of Texas is also required. Salary commensurate with experience and qualifications. Interested parties should submit vita by August 31, 1987 to Personnel Specialist, City of Port Arthur, P.O. Box 1089, Port Arthur, Texas 77640. EOE-M/F.

PHYSICIAN WANTED

Physician with current Texas medical license, board certified in Internal Medicine, Family Practice, or Pediatrics for 40-hour week (Monday–Friday, On-Call), to work at residential facility for M.R. clients.

Resume and license credentials needed. Salary posted at $54,384.

Contact:
The Corpus Christi State School
P.O. Box 9297
Corpus Christi, Texas 78469-9297
512/888-5301

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas: Full time ED positions available in the greater Houston area with local group. Please send CV to STAT Physicians, P.O. Box 79348, Houston, Texas 77279-9348; or call 713 468-7810.

Texas, Weatherford—Excellent opportunity for young physician seeking a career in emergency medicine. Moderate volume facility approximately 45 minutes west of Fort Worth. If interested contact Lori Jordan, Coastal Emergency Services, Inc., 1425 Greenway Dr., Ste. 450, Irving, Texas 75038 or call collect 214 258-5038.

Texas—Full time emergency medicine opportunities available in South Texas, one hour from South Padre Island. Moderate volume facility with competitive compensation and flexible scheduling allowing plenty of time to enjoy the beach and trips to Mexico. If interested contact Lori Jordan, Coastal Emergency Services, Inc., 1425 Greenway Dr., Ste. 450, Irving, Texas 75038 or call collect 214 258-5038.

Emergency Physician—Full and part-time openings available for experienced ER physicians in West Texas ER group. Level II trauma, 175 bed hospital, approximately 15,000 patients annually. Compensation average (full time) $110,000 annually. Also malpractice insurance paid and very attractive benefit package. Emergency Medicine Physicians group, 915 855-0932 or 595-2950, ext. 575.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Practice family medicine with the people in rural Iowa communities where the quality of life is superb. Solo and group practice opportunities available including guaranteed salaries and full benefit packages. For an immediate response please call 1-800-247-3121, ext. 8204 (USA).

Friendly rural community in south-central Texas looking for family practice doctor who enjoys quiet country living. Fully equipped and staffed clinic with well established practice. Rotating call at nearby hospital every 5th weekend and one night per week. Call Moulton Community Clinic 512 596-4675 between 8 am and 5 pm.

Family Practice—If you are a well qualified family physician you can work with PRN, Ltd. in any number of community settings and practice styles. You will receive excellent income without sacrificing your freedom and independence. We provide locum tenens assignments, practice trial options, and permanent placement opportunities throughout the state. Call your colleagues at 1-800-531-1122, or write Kenneth W. Teufel, MD, 1000 North Walnut, Suite A, New Braunfels, Texas 78130.

Family practice physician for 10-member multispecialty group located in the Rio Grande Valley. Clinic has six family practice physicians. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Wanted—A family practice physician for a rural West Texas area that has no physician within 45 miles. Excellent schools, active churches, hospital, nursing home, doctor's clinic, and many recreational activities. Approximately 1,500 people in this ranching and oil area await to welcome a physician to honor and respect. Address any inquiries to Administrator, P.O. Box 3, Sterling City, Texas 76951 or call Administrator, 915 378-3201.

Wanted—General practitioner/industrial medicine. Position available with multispecialty group. Houston metropolitan area. Salary first year plus bonus. Please provide curriculum vitae with initial inquiry. Please reply to Ad-669, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Live the good life in the beautiful Hill Country of Texas. Mason is a friendly town of 2,000, two hours from Austin and San Antonio. Eight tournament quality, lighted tennis courts. Nine-hole golf course ready for play this fall. Office based general/family practice with surgical assist privileges in two nearby hospitals available. Call Jim Pettit, DO, 915 347-5926 anytime.

Family Practice/General Practice, Aransas Pass—Needed immediately, solo FP/GP to run clinic on small resort island near Corpus Christi. Excellent compensation package and working conditions. Negotiable arrangements to meet individual needs. Contact AMI Physician Placement Service, David Brook, 1-800-533-7013 or write AMI Physician Placement Service, 9665 Wilshire Blvd., Ste. 200, Beverly Hills, California 90212.

Family practice physician (BC/BE) to associate with established FP in clinic in small, scenic Hill Country town near San Antonio. Primarily ambulatory/emergency practice with some surgery. Salary plus incentive. Partnership possible. J. E. McCoy, MD, 120 Medical Drive, Boerne, Texas 78006; 512 249-9307.

Internal Medicine

Internist with or without cardiology needed for busy office. Opportunities are unlimited for hard-working and caring physician who wants to do better than average. Terms are negotiable with option to take over practice in three to seven years. Call 214 586-0776 or write Vincent H. Wang, MD, 1005 S. Jackson, Jacksonville, Texas 75766.

Immediate opportunity for full-time family practice or internal medicine physician either rural or urban locations available. Excellent salary plus incentive. For further information call Jerry Lewis at 817 776-4121.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes **Dallas/Fort**

Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 21B SW 26th Avenue, Mineral Wells, Texas 76067; 817 32S-0741.

Obstetrics and Gynecology, Portland—Nueces County (City: 2S,000; area 100,000). Opportunity for O8G to join well established female OBG in practice close to Corpus Christi. Excellent opportunity with attractive compensation package. Contact AMI Physician Placement Service, David Brook, 1-800-533-7013 or write AMI Physician Placement Service, 9665 Wilshire 8lvd., Ste. 200, Beverly Hills, California 90212.

OBG physician for 10-member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San 8enito, Texas 7BS86; 512 399-2443.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Position for board certified/eligible radiologist with experience in US, CT, nuclear medicine, mammography, angiography and interventional radiology. Join group serving clinic and two community hospitals in Central Texas. Salary leading to partnership. Reply to 2027 S. 61st, Suite 116, Temple, Texas 76S01; 817 774-9994.

Other Opportunities

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, O8G, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; S12 476-7129. Toll free in Texas 1-800-331-8472.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Fred 8rinker, Medical Division, JSI, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-047S.

PHYSICIANS

Primary Care Clinics

Killeen, Texas

Physicians/Family practice or primary care specialty. BC or BE. A competitive salary/benefit program is offered in addition to professional development funding and malpractice insurance. For confidential consideration, please send Curriculum Vitae to: **Susan Bray, JSA/Republic, Health Management and Consultant, Box 1305, Columbia, MD 21044; or contact her at:**

301-964-2811

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

The Medical and Surgical Clinic of Sherman, Texas is currently expanding its multispecialty group to include specialists in pediatrics, ophthalmology and otolaryngology. Interested parties please contact Ron Marshall, Administrator, 214 893-S138 (collect).

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 7820S.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1B01 North Lamar 8lvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for 8C or 8E physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78S39; S12 383-1481.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include O8G, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-8080; or send CV to Mitchell & Associates, Inc., P.O. 8ox 1B04, Scottsdale, Arizona B52S2.

Primary care physician to join group of three physicians in Burnet, Texas. Solo practice in clinic with shared expenses. Position immediately available. Prefer family practice, general practice or internal medicine. Hill country community of 3,500, good schools, superb recreational facilities—hunting, fishing and water sports. Low crime. JCAH approved hospital. For further information, contact Peggy Newman, MD, P.O. Box L, Burnet, Texas 78611; 512 7S6-27B4.

Cardiologist, BE, BC—Excellent opportunity with outstanding potential. Modern progressive hospital in an ideal southern family community. Write AD-663, TEXAS MEDICINE, 1B01 North Lamar 8lvd., Austin, Texas 7B701.

Excellent Texas opportunities, ENT, family practitioner, general practitioner, general surgeon, internal medicine, OBG, ophthalmologist, oncologist, pediatrician, radiation oncologist, to practice in one of several lake area communities, in the beautiful Piney Woods area of East Texas. Enjoy boating, fishing, hunting yearound. Excellent quality of life, first year guarantee, etc. Other Texas opportunities available also. Reply with CV to Medical Support Services, Armando L. Frezza, 11S09 Quarter Horse Trail, Austin, Texas 78750; 512 331-4164.

Family Practice and Internists—8C/8E, needed to join multispecialty and single specialty practices. Substantial salary, plus full benefits. Full partnership available. City population 25,000. 160-bed JCAH approved hospital. Located one hour from Memphis, Tennessee on I-55. Send CV to Marvin D. Hendrix, Clinic Administrator, P.O. Box 2311, Jonesboro, Arkansas 72402.

Unexpected Vacancy—Cardiothoracic fellowship, six months to one year balanced program offering experience in adult cardio, pulmonary, esophageal and vascular surgery. Large southwest medical center in United States, academic affiliation. Reply with curriculum vitae to Ad-66B, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

Incredible opportunity—Parkland surgeon, TTU internist, 8C, O8G, and two FPs seeking aggressive 8C/8E FP to round out congenial staff in beautiful NE Montana and replace retiring physician. Outstanding benefit package, unbelievable hunting and fishing. On site pathologist, radiologist and psychologist. O8, surgery optional. Available immediately. Contact Kyle Hopstad, 406 228-43S1 collect.

Full and part-time experienced physicians for established and expanding family care clinic in Northwest Houston. Excellent remuneration and working conditions; flexible scheduling. Contact Director, Medical Center, 792S FM 1960 West, Houston, Texas 77070; 713 469-4S60.

West Texas Nephrologist—Board trained nephrologist to join San Angelo based group to practice clinical nephrology. Active consultation service for acute and chronic disease. Initial partnership may be considered. Call 1-B00-346-7473 or send CV to West Texas Nephrology Associates, P.O. 8ox S7B0, San Angelo, Texas 76902.

Seeking General Surgeon—Prefer board certified general surgeon to join 1S-physician group in Clifton. Salary then partnership considered. Fully accredited 72-bed hospital. Located in heart of Texas with city population of 3,800. Excellent school system; recreational areas nearby. For additional information contact V. D. Goodall, MD, or Mark R. Campbell, MD, 201 S. Avenue T, Clifton, Texas 76634; 817 67S-8621.

Texas Opportunities—Substantial income guarantees. Large cities, suburbs, large-small towns. FP, OBG, PD, IM, NS. Call or send CV to Nancy McEntire, CPC, or Ray Carter, McEntire-Carter Associates, 9S00 Jollyville Road, #142, Austin, Texas 787S9; S12 34S-7327.

Expanding 20-physician multispecialty group has excellent opportunity for the following specialists: family practitioner, pediatrician, O8G, orthopaedic surgeon, and dermatologist. High beginning guaranteed salary in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Administrator, Malone and Hogan Clinic, 1501 West 11th Place, 8ig Spring, Texas 79720.

Primary care physicians to staff freestanding, urgent care centers in West Texas. 8ase salary $60,000, plus percent incentives. 8enefits include malpractice and health insurance. Partnership opportunity after first year. Forty hour work week with flexible scheduling. CV with reference to Ted Zegarra, MD, Response Medical Associates, S774 North Mesa, El Paso, Texas 79912.

Immediate opportunity for family practitioner/GP, general surgeon, OBG willing to do family practice to join a well established and growing practice. No O8 service available in the entire county. Partnership/association without investment, eventual takeover possible. Please reply to Ad-670, TEXAS MEDICINE, 1B01 North Lamar 8lvd., Austin, Texas 78701.

Phlebologist needed to work for another physician in Dallas, Texas, to provide medical care for patients in a medical clinic providing non-surgical treatment for primary varicosities, thrombophlebitis, venous ulcers and care of large varicose veins by sclerotherapy and knowledge of pharmatherapy. Must have one year's internship and two year's experience. Salary $65,000 per year, 44 hours per week. Apply at the Texas Employment Commission, Dallas, Texas or send resume to Texas Employment Commission, TEC Building, Austin, Texas 78778, JO#4640117. Ad paid for by an equal employment opportunity employer.

Excellent opportunity for neurologist with multispecialty clinic in Texas. For further information, call Jerry Lewis at 817 776-4121.

Anesthesiologist—Join a group of three MDs and seven CRNAs serving a 1B0-bed hospital in S.E. Texas. Mail CV to Ad-671, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

Physician Opportunities—Sunbelt. We have unadvertised solo, group and hospital based opportunities for general practice and most specialties. Financial guarantees, benefit packages negotiable. Fee paid. Professionals serving professionals. Send CV to FRH Associates, SS1S New Haven Court, Austin, Texas 7B7S6 or call 512 4S9-6411.

Dalton & Roberson Resource Group, Inc., a full service medical recruiting firm is currently seeking a family practice and O8G physicians to relocate to either the Texas Hill Country or the foothills of the Great Smokey Mountains. 8oth have full modern medical facilities and offer all the amenities of a large city with a small town atmosphere. Excellent compensation package to include relocation, malpractice assistance and guaranteed salary first year. Contact or send CV to Dalton & Roberson Resource Group, Inc., 14811 St. Mary's Lane, #270, Houston, Texas 77079 or 713 SS8-2566.

OPPORTUNITIES SOUGHT

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar 8lvd., Austin, Texas 78701. S12 477-6704, ext. 263.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"
locum tenens & permanent placements

1-800-531-1122
1000 N Walnut (Suite A)
New Braunfels, Texas 78130

Experienced neurologist, BC, with four years experience performing and interpreting MRI and CT of head and spine as well as carotid ultrasound. Seeks affiliation with group needing expertise in these areas. Please reply to Ad-666, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Board certified family practitioner desires to relocate in Austin area after 20 year Air Force career. Extensive experience in administration and in the practice and implementation of family practice medicine. Contact William M. Evans, MD, Col. USAF MC, 1 Magnolia, Bergstrom Air Force Base, Austin, Texas 78719-2606; telephone 512 479-2903 or 512 389-0042.

Primary care internist seeking association with or purchase of thriving general practice or ambulatory care center in Houston. Available now. Contact Ad-672, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than 50% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 18164, Dallas, Texas 75218; 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $1275; Cardionostic Holter recorder (cassette available) from $995. Smallest, slightest Holters update. Fast service (24-48 hrs.) turnover. Hookup kits starting at $4.95. Special introductory offer of three free tests with any purchase or lease of recorder. Cardiologist overread available for $15. If interested call 301 870-3626.

A.D.R. (A.T.L.) 4000 s/l ultrasound machine with aluminum carrying case and roll about table. 3.5 mega hertz sector and linear transducers with video-out. Price $7,900. Contact 512 592-2283 or 512 592-0611.

Wanted—Used mammographic, ultrasound or x-ray equipment. Call Dr. Vancura, 817 774-9994; 2027 S. 61st, Suite 116, Temple, Texas 76501.

Fluoroscopic Picker X-ray Machine—12 years old, with automatic colimation and phototiming and upright Bucky with mirror image intensifier but no television. In excellent working condition. Please call 313 358-3410, 9 am-5 pm.

Office Space/Property

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

North Dallas Suburb—Up to 3,400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 867-6500.

Available for immediate occupancy. 4,484 square foot medical office facility. Las Colinas area. Complete x-ray and laboratory facilities included. Easy access to Highway 114. Ground location. Contact Sharon Smith, 214 631-3880.

Austin—Doctors office space for lease. 2,200 sq. ft., will divide into two offices. Plumbed examination rooms. Near hospitals. Contact Dr. Sidney White, 512 477-9775.

Abilene—Office, sale-lease in medical garden condominiums, complex of four offices around a courtyard with surgeon, ENT, OBG. 1,200 sq. ft., four treatment rooms (all plumbed for air, water, vacuum, oxygen, nitrous), private office, sterilization, hospital nearby. 915 676-7707.

Medical or Dental Suite—Ideal location in NW Houston provides outstanding exposure and referrals. Custom finished to your specifications. Best rates available. Call Jerry Ray at 713 975-8161.

Brenham, Texas (80 miles NW of Houston)—Finished office space available in medical professional building across from hospital. 400 sq. ft. and 1,500 sq. ft. spaces. For information contact Brenham Professional Center, 601 Medical Parkway, Brenham, Texas 77833; 409 836-1010.

Practices

For Sale, General Practice—Near downtown Houston, two blocks from major freeway. Ten minutes from the Medical Center. Solo practice. Generated $200,000+ last year, operating half days. 1,774 sq. ft. of office space in doctors medical plaza; fully equipped. Four treatment rooms and lab and x-ray. Terms negotiable. Contact Mrs. Zal H. Sanders, 9606 Briar Forest Drive, Houston, Texas 77063.

Active Solo Practice/Internal Medicine—Retiring late in 1987. 1,700 sq. ft. modern building. Fully equipped, laboratory, x-ray, three examining rooms, tables, cabinets, etc. Sell or lease building. Sell equipment at small fraction of replacement cost. 2,000 active patients. Will introduce. Practice free. Roy Daugherty, MD, 4006 West 33rd, Amarillo, Texas 79109.

Practice For Sale—Dallas, Casa Linda/White Rock East area. Doctor retiring. Well established practice, excellent for internal medicine or family practice. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker; 214 327-7765.

Medical Practice For Sale/Partnership—Busy family practice would like to sell or form a partnership for a well established second family practice clinic and minor emergency center located in the Northeast Houston area. Prospective physician must be able to practice full time with financial resources for 50 percent partnership investment. For further information contact: Atascocita Management Corporation, 8067 FM 1960 East, Humble, Texas 77346; phone 713 852-8040 between the hours of 12-7 pm.

Jackson and Coker has 40 practices for sale in 25 states. Specialties include: FP, IM, ORS, OBG, OPH, PD, N, GS, and U. I'm sure one of them is just the practice you have been looking for. Call today for more information. Bob Kinberger, 404 393-1210.

Practice For Sale—For sale north of Dallas. Well established internal medicine, hematology/oncology, including equipment, office furniture and staff who wish to remain. Available immediately. Apply P.O. Box 2026, Sherman, Texas 75090.

For Sale—Internal medicine practice in Kerrville, Texas. Internist wishes to retire. For particulars contact Alex M. Rosenblum, MD, 715 Hill Country Drive, Kerrville, Texas 78028.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 75080. Contact Dan Lewis at 214 437-1180 office or 214 238-7129 evenings.

For residents, start-up practitioners, and established physicians—unsecured signature loans $5,000-$60.000. No points or fees. Competitive rates, level payments. Up to six years to repay. Deferred principal option. No prepayment penalties. For information and application, call Austin 512 836-9126, MediFinancial, Harper, or 1-800-331-4952, MediVersal, Dept. 114.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

Advertising Rates & Data: Regular classified advertising sells for $39. (US currency) per issue for 50 words or less, payable in advance. Display classified advertising sells for $70. per column inch, per month. A variety of typefaces, logos and borders may be used in display classified ads. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings cannot be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Federal laws prohibit references to race, color, religion, sex, national origin, or age unless bona fide occupational qualifications. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

DON'T LIGHT UP. CALL UP.

If you're ready to stop smoking, the Cancer Information Service is ready to start helping.

Just call, toll-free...

1-800-4-CANCER

CANCER INFORMATION SERVICE
The University of Texas M. D. Anderson Hospital

Advertising Directory

Air Force	65
American Physicians Insurance Exchange	33
American Physicians Life Insurance	59
Ayerst Laboratories	19–22
Biotics Research Corporation	4
BMW Center	29
Campbell Laboratories, Inc.	46
Dallas Rehabilitation Institute	27
Devereux Foundation	53
Diagnostic Clinic of Houston	30
Family Practice Recertification	8
I. C. System, Inc.	3rd Cover
Knoll Pharmaceutical	31, 32
Eli Lilly & Company	50
Marion Laboratories, Inc.	17, 18
McNeil Pharmaceuticals	45
The Medical Protective Company	7
MEDS	15
Roche Laboratories	1, 2, 25, 26
Scott and White Clinic	Back Cover
Michael R. Sharp, Attorney	2nd Cover
Spring Shadows Glen	2nd Cover
Starlight Village Hospital	86
Texas Medical Association	
Hospital Medical Staff Section	14
Memorial Library	74
Physician Health and Rehabilitation Assistance Fund	71
Texas Medical Association Insurance Program	12
Texas Medical Liability Trust	51
Timberlawn Psychiatric Hospital	Back Cover
The University of Texas Health Center at Tyler	46
The Upjohn Company	49
Vestra-Subco, Inc.	8

Texas Physicians' Directory	76–82
Classified Advertising	83–85

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas

27 million Americans can't read a bedtime story to a child.

It's because 27 million adults in this country simply can't read.

Functional illiteracy has reached one out of five Americans. It robs them of even the simplest of human pleasures, like reading a fairy tale to a child.

You can change all this by joining the fight against illiteracy.

Call the Coalition for Literacy at toll-free **1-800-228-8813** and volunteer.

Volunteer Against Illiteracy. The only degree you need is a degree of caring.

Ad Council Coalition for Literacy

COURSES

AUGUST

Basic Sciences

Aug 12-15, 1987
ASPEN BASIC SCIENCE: RECEPTORS AND DISEASE. Given Institute of Pathobiology, Aspen, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

Cardiology

Aug 25-27, 1987
AMERICAN COLLEGE OF CARDIOLOGY/13TH ANNUAL TUTORIALS IN THE TETONS. Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo. Fee $290 members, $355 nonmembers. Category 1, AMA Physician's Recognition Award; 14 hours. Contact the Registration Secretary, Extramural Programs Department, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Family Medicine

Aug 1-2, 1987
4TH ANNUAL FAMILY MEDICINE RESEARCH CONFERENCE. The University of Texas Medical School, Houston. Fee $60. Category 1, AMA Physician's Recognition Award; 10.5 hours, AAFP prescribed. Contact Marjorie Kraft, 6431 Fannin, G.104, Houston, TX 77030 (713) 792-5346

General Medicine

Aug 23, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. Dallas. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Aug 27-28, 1987
CHOLESTEROL ISSUES FOR THE 80s. Lincoln Hotel, Dallas. Fee $175. Category 1, AMA Physician's Recognition Award; 11 hours. Contact Director of Continuing Education, Institute for Aerobics Research, 12330 Preston Rd, Dallas, TX 75230 (800) 527-0362, ext 253

Internal Medicine

Aug 2-7, 1987
7TH ANNUAL INTERNAL MEDICINE REVIEW. South Padre Island Hilton Hotel, South Padre Island, Tex. Fee $350. Category 1, AMA Physician's Recognition Award; 25 hours. Contact Susan Larson, Office of Continuing Medical Education, Scott and White Clinic, Temple, TX 76508 (817) 774-4083

Aug 17-21, 1987
RENAL DISEASE FOR THE INTERNIST AND NEPHROLOGIST. Given Institute of Pathobiology, Aspen, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

Pediatrics

Aug 3-6, 1987
13TH ANNUAL PEDIATRIC PROGRAM. Given Institute of Pathobiology, Aspen, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

Perinatology

Aug 7-10, 1987
PERINATAL MEDICINE CONFERENCE. Snowmass Conference Center, Snowmass Village, Colo. Category 1, AMA Physician's Recognition Award. Contact the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 E 9th Ave, Box C-295, Denver, CO 80262 (303) 394-5195

SEPTEMBER

Anesthesiology

Sept 19-20, 1987
4TH ANNUAL PAIN SYMPOSIUM. Texas Tech University Health Sciences Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University HSC, Lubbock, TX 79430 (806) 743-2929

Cardiovascular Disease

Sept 9-12, 1987
UPDATE IN CARDIOLOGY/CARDIOVASCULAR BOARD REVIEW. Indiana Convention Center, Indianapolis. Fee $475 members, $525 nonmembers. Category 1, AMA Physician's Recognition Award; 1 hour. Contact Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

General Medicine

Sept 10-11, 1987
NIH HEALTH TECHNOLOGY ASSESSMENT WORKSHOP/HEALTH BENEFITS OF PETS. Masur Auditorium, Warren Grant Magnuson Clinical Center, Rockville Pike, Md. No charge. Category 1, AMA Physician's Recognition Award; 10.5 hours. Contact Sharon Feldman, Prospect Associates, 1801 Rockville Pike, Suite 500, Rockville, MD 20852 (301) 468-6555

Sept 24-27, 1987
MEDICAL ACUPUNCTURE FOR PHYSICIANS. Texas Tech University Health Sciences Center, Lubbock, Tex. Fee $3000 for two courses/ Second course Jan 14-23, 1988. Limit 45 persons, deadline July 31. Category 1, AMA Physician's Recognition Award; 200 hours. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 743-2929

Sept 26, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. Houston. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Neurology

Sept 24-30, 1987
2ND ANNUAL CONFERENCE ON THE FOUNDATIONS OF BEHAVIORAL NEUROLOGY/ELECTROLYTES AND TRACE METALS AFFECTING BRAIN DYSFUNCTION AND BEHAVIOR. Hong Kong Sheraton, Hong Kong. Fee TBA. Category 1, AMA Physician's Recognition Award; 25 hours. Contact Southern California Neuropsychiatric Institute, 6794 La Jolla Blvd, La Jolla, CA 92037 (619) 454-2120

Obstetrics and Gynecology

Sept 17-18, 1987
14TH ANNUAL PERINATAL SEMINAR. Sid Richardson Auditorium, Scott and White Hospital, Temple, Tex. Fee $65. Category 1, AMA Physician's Recognition Award; 11 hours. Contact Susan Larson, 2401 S 31st, Temple, TX 76508 (817) 774-4083

Organ Transplantation

Sept 8-11, 1987
INTERNATIONAL ORGAN TRANSPLANT FORUM. David L. Lawrence Convention Center, Pittsburgh, Pa. Fee $250. Category 1, AMA Physician's Recognition Award; 26 hours. Contact International Organ Transplant Forum, Office of the Secretariat, DeSoto at O'Hara Streets, Pittsburgh, PA 15213 (412) 647-3490

Plastic Surgery

Sept 27-30, 1987
PLASTIC SURGERY OF THE BREAST/THE ART AND SCIENCE 1987 UPDATE. Eldorado Hotel, Santa Fe, NM. Fee $600 members, $650 nonmembers. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Plastic Surgery Education Foundation, 233 N Michigan Ave, Suite 1900, Chicago, IL 60601 (312) 856-1818

Radiology

Sept 14-18, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Baylor Center for Imaging Research, The Woodlands, Tex. Fee $1,000 physicians, $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

Sept 19-20, 1987
REGIONAL REVIEW COURSE IN HAND SURGERY. Atlanta. Fee TBA. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Terri Harrington, American Society for Surgery of the Hand, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

OCTOBER

Basic Sciences

Oct 23-24, 1987
6TH SOUTHERN BIOMEDICAL ENGINEERING CONFERENCE. The Regent Hotel, Dallas. Fee $80 before Oct 1, $100 after Oct 1. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Cardiovascular Disease

Oct 7-10, 1987
CARDIOLOGY AND CARDIOVASCULAR SURGERY: INTERVENTIONS, 1987. Westin Galleria Hotel, Houston. Fee $375 physicians, $225 abstract presenters, $200 housestaff, $225 nurses. Category 1, AMA Physician's Recognition Award; 24 hours. Contact Debby Butler, PO Box 20269, Mail Code 3-276, Houston, TX 77225 (713) 791-2157

Critical Care Medicine

Oct 7-9, 1987
EMERGING TRENDS IN CRITICAL CARE 1987. Crowne Plaza Hotel, Orlando, Fla. Fee TBA. Category 1, AMA Physician's Recognition Award; 15 hours. Contact Rick Mace, Executive Director, Florida Heart Institute, 500 E Rollins, Suite 101, Orlando, FL 32803 (305) 897-1575

Emergency Care

Oct 22-24, 1987
EMERGENCY MEDICINE UPDATE. Westin Hotel-Galleria, Dallas. Fee $125. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Endocrinology

Oct 23-24, 1987
MANAGEMENT OF THE COMPLICATIONS OF DIABETES. Westin Oaks Hotel, Houston. Fee TBA. Credit TBA. Contact Carol Soroka, Office of Continuing Education, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Family Medicine

Oct 17-18, 1987
CHRONIC PAIN MANAGEMENT IN PRIMARY CARE. Marriott Hotel-Medical Center, Houston. Fee $150, Category 1, AMA Physician's Recognition Award; 12 hours. Contact Sam Nixon, MD, Division of Continuing Education, The University of Texas Health Science Center, 1100 Holcombe Blvd, Houston, TX 77225 (713) 792-4671

Obstetrics and Gynecology

Oct 9-10, 1987
9TH ANNUAL SEMINAR IN OBSTETRICS AND GYNECOLOGY. Texas Tech University Health Sciences Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University HSC, Lubbock, TX 79430 (806) 743-2929

Ophthalmology

Oct 9, 1987
CURRENT CONCEPTS IN GLAUCOMA MANAGEMENT. The University of Texas Health Science Center, Room D1.600, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Orthopedic Surgery

Oct 29-31, 1987
DALLAS SHORT COURSE: ORTHOTICS AND PROSTHETICS. The University of Texas Health Science Center, Dallas. Fee $175. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Ann Carlton, Department of Orthopedic Surgery, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3525 or (214) 688-2166

Pediatrics

Oct 2-3, 1987
11TH ANNUAL PEDIATRICS POSTGRADUATE CONFERENCE. Holiday Inn-Civic Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 743-2929

Oct 16-17, 1987
PRIMARY CARE PEDIATRICS FOOTBALL WEEKEND. Sheraton Hotel, Waco, Tex. Fee $100. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Radiology

Oct 26-28, 1987
MAGNETIC RESONANCE IMAGING/NIH DEVELOPMENT CONFERENCE. Masur Auditorium, Warren Grant Magnuson Clinical Center, Bethesda, Md. Fee TBA. Credit TBA. Contact Sharon Feldman, Prospect Association, Suite 500, 1801 Rockville Pike, Rockville, MD 20852 (301) 468-6555

Oct 30-Nov 1, 1987
DIAGNOSTIC RADIOLOGY UPDATE. Lincoln Hotel, Dallas. Fee $325. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Dolly Christensen, Department of Radiology, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2502 or 688-2166

Surgery

Oct 17-18, 1987
REGIONAL REVIEW COURSE IN HAND SURGERY. Denver. Fee TBA. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Terri Harrington, American Society for Surgery of the Hand, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Oct 30-31, 1987
GENERAL SURGERY UPDATE, 1987. Marriott Hotel, Medical Center, Houston. Fee $200. Category 1, AMA Physician's Recognition Award; 12 hours. AAFP prescribed. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

NOVEMBER

Critical Care Medicine

Nov 12-14, 1987
7TH ANNUAL WILLIAM BEAUMONT ARMY MEDICAL CENTER TRAUMA SYMPOSIUM: CONTROVERSIES IN HEAD AND NECK TRAUMA. El Paso, Tex. Contact LTC Troy Reyna, Chief, Trauma Service, William Beaumont Army Medical Center, El Paso, TX 79920-5001 (915) 569-2621 or (915) 569-2787

Gastroenterology

Nov 14, 1987
GASTROINTESTINAL ENDOSCOPY: PERSPECTIVES AND REFLECTIONS. Houston. Contact Lila Lerner or Vicki Forgac, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

Nov 8, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. San Antonio. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Internal Medicine

Nov 20-21, 1987
UPDATE IN SEXUALLY TRANSMITTED DISEASES. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Obstetrics and Gynecology

Nov 3-7, 1987
CONTEMPORARY ISSUES AND PRACTICES IN OB/GYN. Dallas. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Nov 4-6, 1987
UPDATE IN PELVIC AND VAGINAL SURGERY. San Antonio, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Nov 13-14, 1987
OFFICE GYNECOLOGY AND FOOTBALL WEEKEND. College Station, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Pediatrics

Nov 13-14, 1987
PEDIATRICS FOR THE PRACTITIONER: 21ST ANNUAL KENNETH C. HALTALIN PEDIATRICS SEMINAR. Location TBA. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Orthopedic Surgery

Nov 13-14, 1987
THE DISTAL RADIOULNAR JOINT: PROBLEMS AND PROCEDURES. Orlando, Fla. Contact the American Society for Surgery of the Hand, 3025 South Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Surgery

Nov 4-7, 1987
2ND INTERNATIONAL CONGRESS ON CYCLOSPORINE. Washington, DC. Contact Alice Reardon, Continuing Education Division, G.104 MSB, The University of Texas Medical School, 6431 Fannin, Houston, TX 77030 (713) 792-5346

DECEMBER

Computer Applications

Dec 7-8 and Dec 10-11, 1987
COMPUTER APPLICATIONS: AN INTRODUCTORY WORKSHOP. Houston. Contact Robin Murray, The American College of Obstetricians and Gynecologists, 600 Maryland Ave, SW, Washington, DC, 20024-2588 (202) 638-5577, ext 343

Physical Medicine and Rehabilitation

Dec 3-6, 1987
INNOVATIVE AND CONTROVERSIAL STRATEGIES IN REHABILITATION. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Radiology

Dec 7-11, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. The Woodlands, Tex. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

Dec 3-4, 1987
SURGICAL HEALTH POLICY AND FINANCE. New York. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category I, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Aus-

tin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

EF TELEPLAST TELECONFERENCES

Oct 17, 1987, Saturday, 10 am to 12 pm
COSMETIC EYELID SURGERY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

Dec 5, 1987, Saturday, 10 am to 12 pm
SECONDARY RHINOPLASTY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

AUGUST

MEDICAL OFFICE MANAGEMENT INSTITUTE
Aug 3-7, 1987, San Antonio Marriott Riverwalk, San Antonio
Aug 24-28, 1987, Sheraton Park Central Hotel and Towers, Dallas

SEPTEMBER

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Sept 12, 1987, Four Seasons Hotel, Austin

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hrs
Sept 16, 1987, Bexar County Medical Society Headquarters, San Antonio
Sept 18, 1987, El Paso Marriott, El Paso
Sept 29, 1987, Holiday Inn Civic Center, Lubbock
Sept 30, 1987, Holiday Inn Country Villa, Midland

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hrs
Sept 16, 1987, Bexar County Medical Society Headquarters, San Antonio
Sept 18, 1987, El Paso Marriott, El Paso
Sept 29, 1987, Holiday Inn Civic Center, Lubbock
Sept 30, 1987, Holiday Inn Country Villa, Midland

CALENDAR OF MEETINGS ■Denotes Texas Meetings

JULY

■TEXAS SOCIETY FOR RESPIRATORY THERAPY ANNUAL MEETING, Houston, July 14-19, 1987. Mike Marks, 506 W 12th St, Austin, TX 78701 (512) 479-0425

AUGUST

AMERICAN ASSOCIATION OF PHYSICIANS FOR HUMAN RIGHTS/ 1987 ANNUAL MEETING AND AIDS UPDATE, Minneapolis, Aug 4-7, 1987. Contact AAPHR, Box 14366, San Francisco, CA 94144

■TEXAS PERINATAL ASSOCIATION, INC, ANNUAL MEETING, El Paso, Aug 7-9, 1987. Dianne Brown, TPA, PO Box 2446, Lubbock, TX 79408-2446 (806) 743-3678

■WORLD CONGRESS ON MEDICAL PHYSICS AND BIOMEDICAL ENGINEERING, San Antonio, Aug 6-12, 1987. Contact David Kopp, PhD, Dept of Radiology, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 567-5550

SEPTEMBER

AMERICAN ACADEMY OF OTOLARYNGOLOGY: HEAD AND NECK SURGERY ANNUAL MEETING, Chicago, Sept 20-24, 1987. Sharon Crowel, 1101 Vermont Ave NW, Suite 302, Washington, DC 20005 (202) 289-4607

■**TEXAS MEDICAL ASSOCIATION FALL CONFERENCE**, Austin, Sept 25-27, 1987. Contact Robert Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

for
Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

SCOTT&WHITE

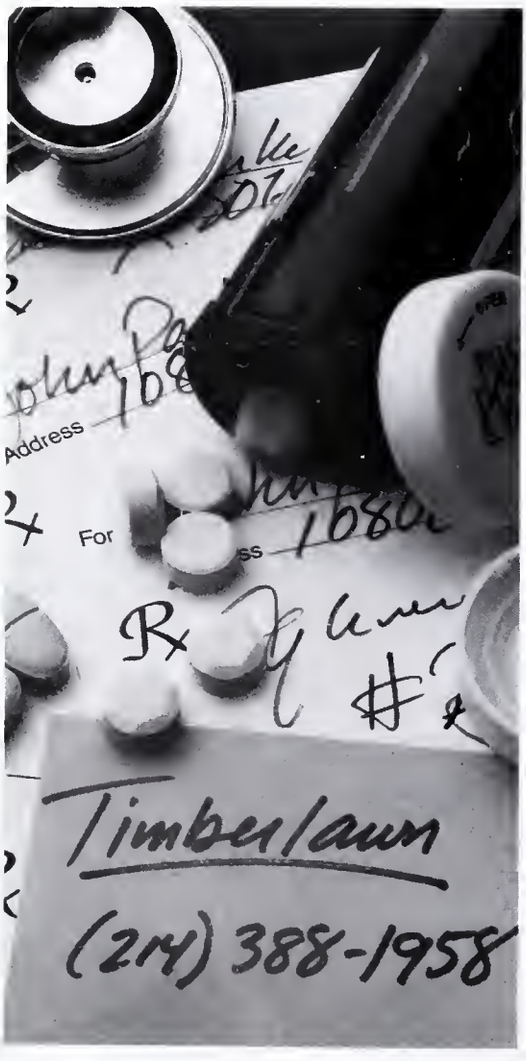
Texas A&M University
College of Medicine

Seventh Annual

INTERNAL MEDICINE REVIEW

For The Primary Care Physician
South Padre Hilton Resort
SOUTH PADRE ISLAND, TEXAS
August 2-7, 1987

For more information or to register contact: Office of Continuing Medical Education, (817) 774-2350, Scott and White, Temple, Texas 76508.



If the problem's close to home, now help is, too.

In today's medical community, the problem of substance abuse can strike very close to home. Indeed, physicians themselves are sometimes impaired by drug or alcohol abuse.

But professional treatment for health professionals is available. And now it's offered here in the south central U.S. by one of the nation's most respected private psychiatric hospitals, Timberlawn of Dallas.

The Timberlawn in-patient program for impaired health care professionals features:

Individual evaluation
Multi-disciplinary treatment
Family counseling
Peer support groups
Aftercare and monitoring services
Voluntary community service component

For more information contact:
Edgar P. Nace, M.D., Chief of Substance Abuse Services

Timberlawn
Psychiatric Hospital

P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958

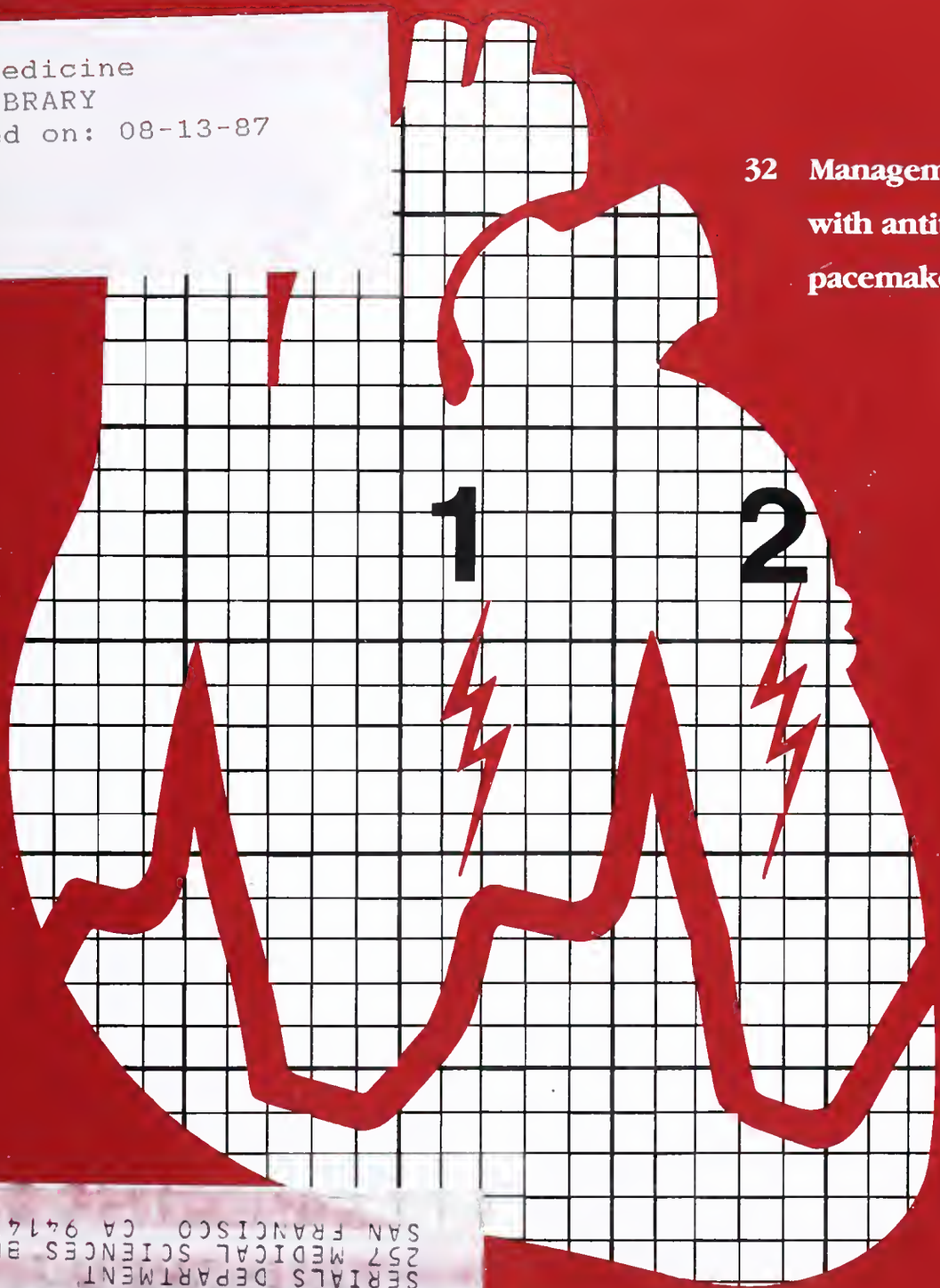
AUGUST 1987

Texas Medicine

RRENT
EA

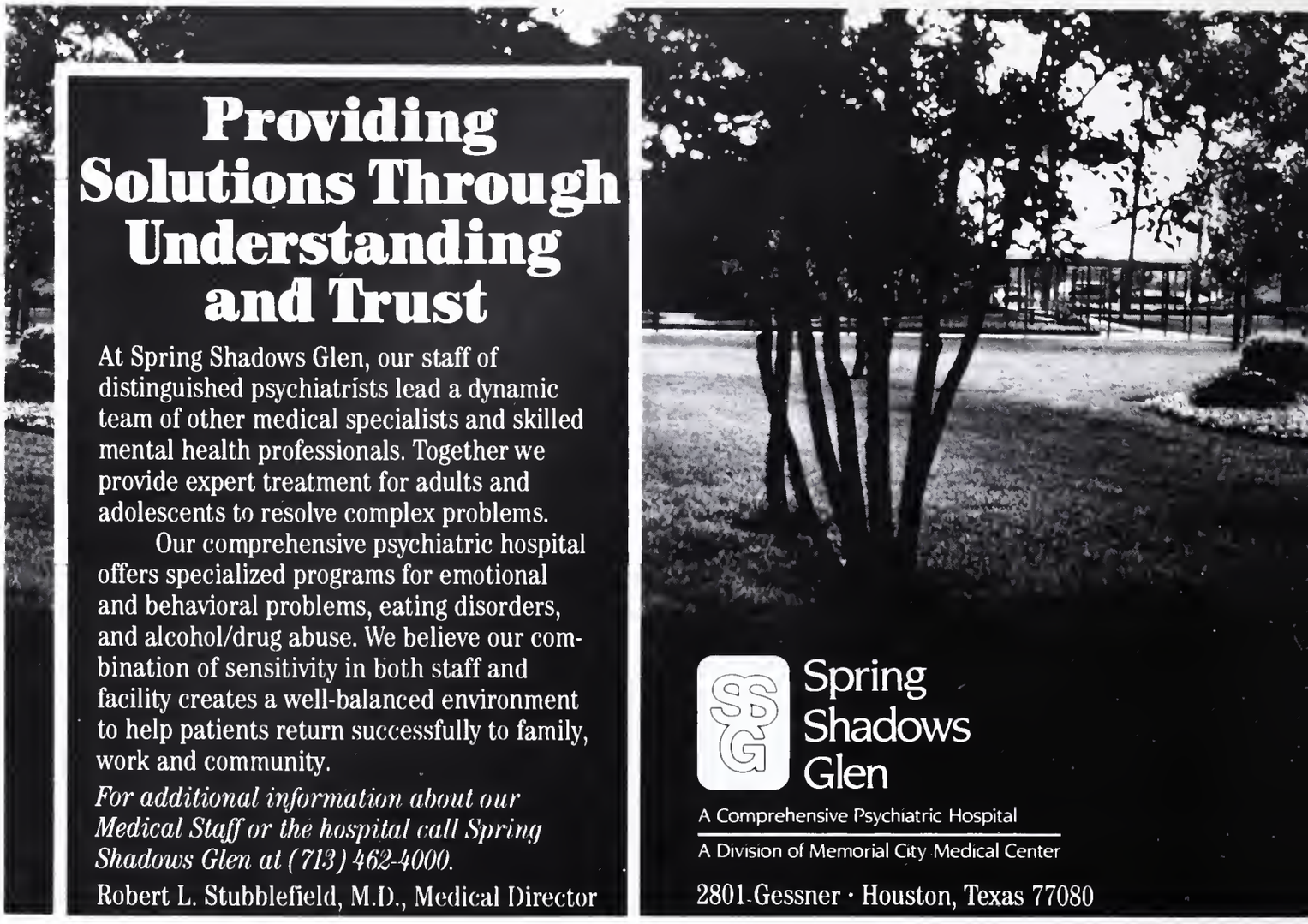
9 TMA proposals win nod at AMA
68 Saragosa: The medical response
71 Medicine and the Law: Illegal aliens are not for hire
91 Continuing medical education opportunities

Texas medicine
UCSF LIBRARY
Received on: 08-13-87



32 Management of refractory SVT with antitachycardia pacemaker

UCSF LIBRARY
SERIALS DEPARTMENT
257 MEDICAL SCIENCES BUILDING
SAN FRANCISCO CA 94143
****



Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080

MICHAEL R. SHARP
ATTORNEY

REPRESENTATION IN MATTERS OF PROFESSIONAL LICENSURE BEFORE THE TEXAS STATE BOARD OF MEDICAL EXAMINERS

SHARP, TACKETT & DAVIDSON,
A PROFESSIONAL CORPORATION
1680 One American Center • Austin, Texas 78701 • (512) 473-2265

Not certified by the Texas Board of Legal Specialization.
Certification is not currently available to anyone in this legal area.

In acute and chronic edema due to CHF

FOR PREDICTABLE CONTROL

- **Less potassium loss for a given amount of sodium excretion than with furosemide[1-3]**
- **Predictable dose response[4]**
- **Diuresis completed hours faster than with furosemide after oral dosing[5]**
- **Better GI absorption[6,7]**
- **Early evening dosing helps prevent nocturnal dyspnea**

As with all loop diuretics, excessive doses of BUMEX can lead to profound diuresis with water and electrolyte depletion, including hypokalemia, so serum electrolytes should be monitored.

Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

References: 1. Flamenboum W: *Am J Cardiol 57*(2):38A-43A, 1986 2. Brater DC, Fox WR, Chennavasin P: *J Clin Pharmacol 21*:599-603, 1981. 3. Iber FL, Baum RA: *J Clin Pharmacol 21* 697-700, 1981. 4. Henning R, Lundvall O: *Eur J Clin Pharmacol 6*:224-227, 1973. 5. Physicians' Desk Reference, 40th ed Oradell, NJ, Medical Economics Company, 1986, pp 939, 1480. 6. Pentikainen PJ, *et al: Br J Clin Pharmacol 4*:39-44, 1977. 7. *Losix, A Review* Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 1980.

BUMEX®
(bumetanide/Roche)
0.5-mg, 1-mg and 2-mg scored tablets
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome.
Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.
Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.
CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.
WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels.
Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.
Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use: Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration. The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
Parenteral Administration. Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.
HOW SUPPLIED: *Tablets,* 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Paks of 30, Tel-E-Dose® cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg— ROCHE BUMEX 2
Ampuls, 2 ml, 0.25 mg/ml, boxes of ten
Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

PI 0985

Roche Laboratories
a division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

In acute and chronic edema due to CHF

A DIURETIC THAT GIVES YOU PREDICTABLE CONTROL

Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

Please see adjacent page for references and summary of product information.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

TexasMedicine

VOLUME 83 AUGUST 1987

Contents

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

J. Forrest Fitch, MD, McAllen
Secretary

James M. Graham, MD, Austin
Harold R. High, MD, Cuero
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

David Vanderpool, MD, Dallas
President

E. Rubin Bernhard, MD, San Antonio
Vice President

Val F. Borum, MD, Fort Worth
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Margie B. Peschel, MD, Fort Worth
Secretary

Robert G. Mickey, Austin
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd. Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Shari Henson, Production Manager/
Editorial Assistant
Patty Illich, Administrative Secretary/
Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates, plus 7.25% state sales tax for Texas subscribers only, are: Members, $16 per year plus $1.16 sales tax; nonmembers and institutions, $20 per year plus $1.45 sales tax; foreign, $24 US currency; single copy, $2 plus $.15 sales tax.

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701.

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701.

ARTICLES

32 Management of refractory SVT with antitachycardia pacemaker
Mark S. Kremers, MD; Kevin R. Wheelan, MD

34 Emotional distress and psychosocial adaptation in cancer patients
Terry C. McMahon, MD

45 Anterior ischemic optic neuropathy after coronary bypass surgery
Jack N. Alpert, MD; Yolanda Pena, MD; D. Robert Leachman, MD

49 Update on thyroid function testing
John H. Liles, MD

54 Management of Henoch-Schönlein purpura and polyarteritis nodosa
Edward G. Ford, MD; L. Michelle Jennings, BS; Richard J. Andrassy, MD

59 Statewide test of a new postmarketing drug surveillance system
Seymour Fisher, PhD; Stephen G. Bryant, PharmD; Brenda L. Solovitz, DrPH; Ronica M. Kluge, MD

63 Cancer update: Implications of allied health and nursing students' knowledge of cancer prevention
Robert E. Roush, EdD, MPH; William A. Thomson, PhD; Peter L. Andrus, MD

EDITORIALS

5 Oncology Guidelines Report coming in September issue
John A. Mangos, MD

5 Texas Medical Foundation at the crossroads
Allen M. Fain, MD

FEATURE

68 Saragosa: The medical response

MEDICINE AND THE LAW

71 Immigration Reform and Control Act of 1986
Helene A. Alt, JD; Suzanne Anderson

NEWS

TMA in action

9 TMA proposals impact AMA House of Delegates' actions
11 DRGs, generic drugs, tobacco on AMA House agenda
11 AMA favors Texans running for elective office
11 "Target Tomorrow" focuses on new members under 40
12 PDQ use eligible for Category 1 credit
12 Association offers tapes of medical/legal symposium
12 Amendment authorizes delegate from Young Physician Section

Health line

12 Delegates address issues related to AIDS
13 Prevention of TB in jails subject to TDH guidelines
13 Breast screening project prompts unprecedented response

Socioeconomics

13 Poll asks who's to blame for high liability premiums
15 St Paul reports claims against emergency physicians
15 AMA House proposes changes in PRO law
15 JCAH to require policies on DNR orders in 1988

Capital comments

23 Liability bills awaits hearings in Congressional committees

23 Newsmakers

DEPARTMENTS

48 Information for authors
66 Clinical abstracts
73 Deaths
76 Medicine in literature
91 Continuing education directory

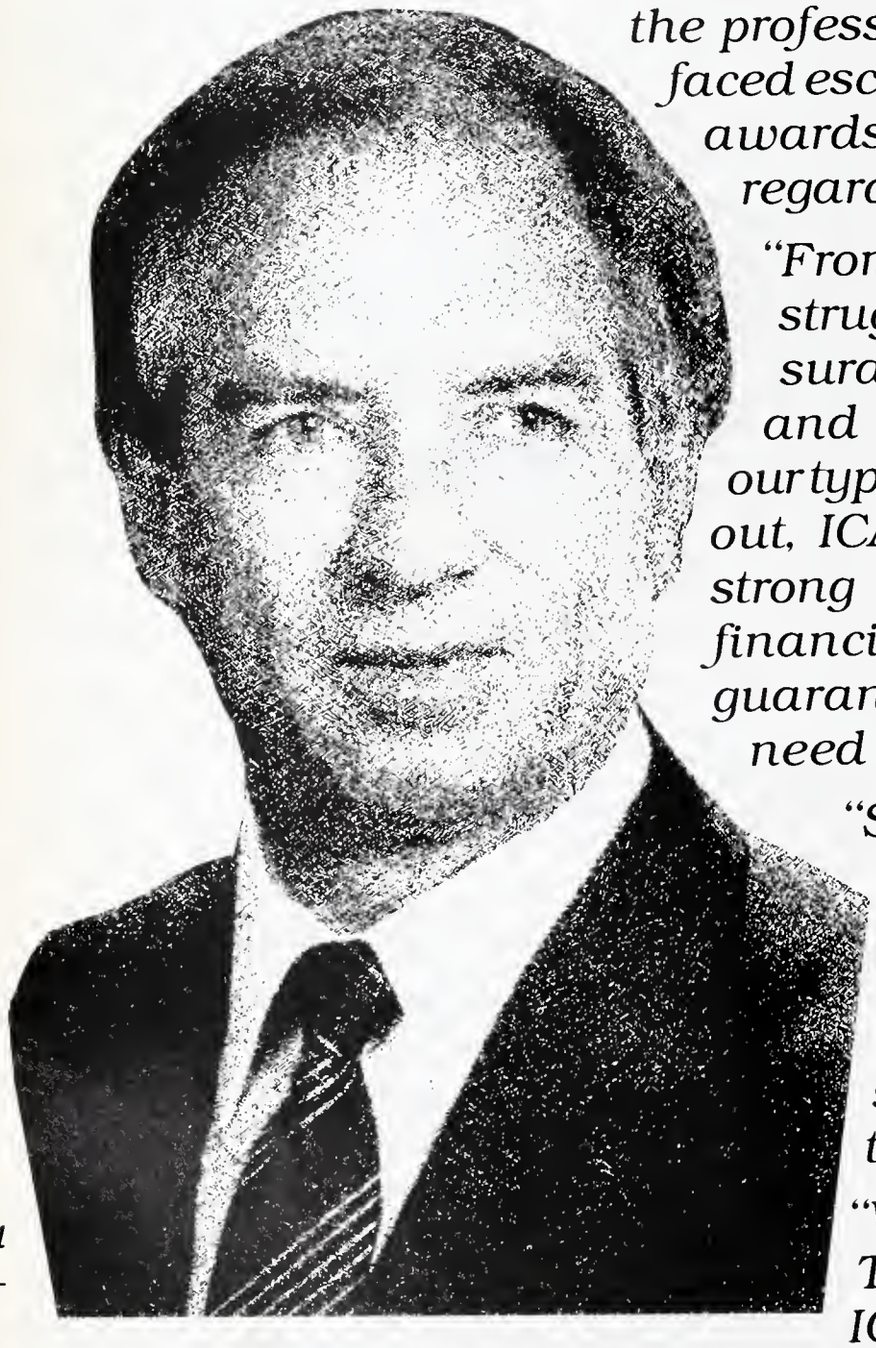
ON THE COVER

This month's cover article describes the treatment of a patient with Wolff-Parkinson-White syndrome and supraventricular tachycardia. "Management of refractory SVT with an antitachycardia pacemaker," written by Mark S. Kremers, MD, and Kevin R. Wheelan, MD, begins on page 32. Cover design by Ed Triggs.

COMING NEXT MONTH

In a double issue next month, *Texas Medicine* will publish the Oncology Guidelines Report of the Legislative Task Force on Cancer in Texas. Articles scheduled for September deal with health care spending in Texas, treatment of obstructive sleep apnea, post-concussive syndrome, and teenage childbearing trends in Texas.

"We Understand Your Frustration."



DOYLE N. ROGERS, MD, FCAP, JD
Chairman, President, CEO

"You don't need to be told how tough the last few years have been in the professional liability arena. You've faced escalating premiums, escalating awards and escalating frustrations, regardless who insures you.

"From our side of the table, we've struggled with diminishing reinsurance, exhorbitant claims costs and an industry-wide change in our type of insurance policy. Throughout, ICA has strived to maintain a strong balance sheet, because our financial stability is your only real guarantee that we'll be here if you need us.

"So, we made tough and sometimes, unpopular, decisions. But the bottom line is this: We've positioned ourselves as a strong force in the professional liability business, for today and tomorrow.

"We'll be here if you need us. That's what we both want. At ICA, we're committed to protecting your practice."

ICA
INSURANCE
CORPORATION
OF AMERICA
Houston, Texas (713) 871-8100
The Professional Liability Specialist

Oncology Guidelines Report coming in September issue

In a double issue next month, *Texas Medicine* will publish the Oncology Guidelines Report of the Legislative Task Force on Cancer in Texas.

Developed by 87 cancer specialists from throughout Texas, these pragmatic guidelines can help busy physicians make decisions about primary care, consultation, or referral for cancer patients. They offer current experience in a rapidly changing field.

The material includes information on the epidemiology, etiology, detection and diagnosis, classification, principles of treatment, and results and prognosis for each cancer site.

The contents include head and neck, urologic, pediatric, colorectal, gynecologic, lung, and breast cancer, and hematology-oncology.

These guidelines are one tangible product of the task force that Texas Speaker of the House Gib Lewis appointed in 1984 to identify priority cancer control issues, and to propose methods for improving programs in cancer prevention, detection, and treatment. They are part of an ongoing physician education effort.

To give proper credit to everyone involved in this project is beyond our scope here, but the forthcoming volume will contain a list of contributors.

We do, however, gratefully acknowledge the support of the American Cancer Society, Texas District Branch, and the Texas Cancer Council, who are providing funds for publication of the Oncology Guidelines Report.

Please watch for your two-volume September issue—it will arrive in a plastic wrapper—and plan to spend some time renewing your knowledge of the care of cancer patients.

JOHN A. MANGOS, MD
Chairman, Editorial Committee for *Texas Medicine*, Department of Pediatrics, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284.

Texas Medical Foundation at the crossroads

In October 1986, the Texas Medical Foundation (TMF) was awarded a two-year continuation as the Peer Review Organization (PRO) of Texas. TMF was one of the 18 PROs (out of 54 in the country) to achieve this unusual feat without having their contracts opened for competitive bidding.

As TMF enters into its second contract period, maintaining review within the Health Care Financing Administration's (HCFA) guidelines will be as difficult as was implementing the review guidelines at the onset of the first contract. Although there is disagreement among practicing physicians on the *how* and *what* of medical peer review, the majority agree that decisions regarding the medical necessity of admissions and quality care are made best by physicians, not by fiscal intermediaries or similar nonmedical groups. Both the American Medical Association and the American Osteopathic Association continue to maintain that peer review organizations are the most appropriate vehicles for minimizing further interference by the government or other nonmedical agencies in the delivery of health care.

TMF does not expect reasonable and caring physicians to always agree with the decisions made in the medical peer review program, any more than all the members of a hospital utilization review committee will always agree on cases they review. Such disagreements, however, do not bring indictments that others are wrong because they disagree. Although TMF has recognized many of its shortcomings and is working to correct them, there are still no precise formulas to assure that very difficult decisions, especially when applied retrospectively, always will be right or will please everyone.

Physicians need to understand that the majority of TMF's functions are mandated by HCFA. Although TMF struggles daily to develop acceptable, innovative means to satisfy its contractual obligations while preserving the physicians', patients', and hospitals' autonomy, TMF cannot do its job alone. TMF needs to be able to turn to other areas where help is and should be available—to the hospitals and their respective medical staffs and viable committee activities. Here lies one of medical review's greatest resources, and it is here where most physicians partially can control their destinies.

Hospitals and physicians do not have to wait until a TMF review team uncovers utilization problems or quality concerns. Instead, hospitals and medical staffs should develop a heightened awareness of the patterns of medical care, and participate in quality assurance, utilization review, and medical record activities. It is there they will begin to identify habitual offenders, areas of questionable care or practice, and potential threats to patient welfare. It is there that improved and effective medical staff guidelines for monitoring all hospital practice activities should be in place and functioning, with the *hospital's medical staff* addressing the *hospital's* problems.

When a problem is identified, the solution should fit the problem. Where unnecessary admissions are excessive, mandatory preadmission review should be implemented. Where premature discharges are detected, mandatory predischarge review should be required with ongoing monitoring. Where avoidable infections are noted, infection control measures and mandatory consults should be considered. Where the problem relates to a physician's lack of current knowledge or practice, mandatory continuing education and/or consultations should be required. Where quality concern relates to a physician's medical judgment, mandatory consultations on specific cases should be required.

Medicine today may not seem to resemble the medicine some of us may have learned while in training. For instance, the medical record has evolved from an evaluation of a person's health to a legal document. The art of medicine seems to

have been sacrificed for the data, testing, and documentation needed for chart completion (2).

All of these frustrations and perceived invasions in our planned practice actually stem from the same rules and regulations taught us during medical training. Remember the frustration of having to justify admissions and indications for surgery? Remember the long histories and physicals to document those indications? Remember the continuous progress notes to justify plans of treatment? Physicians must realize that all the requirements of peer review, utilization review, and quality assurance really are not new, but represent a return to the basics applied in medical training. The medical record has to be documented completely now, just as it was in training, to obtain the cherished "good" medical decision.

To add to the physician's worries, TMF review is based on documentation of the care provided. Unlike a malpractice suit in which the medical record is only one indication of what actually happened to the patient, TMF is restricted to the medical record to make its final review determination. Documentation is so essential to TMF's ability to perform any of its responsibilities that a physician's failure to document appropriately can lead to his or her exclusion from the Medicare program (1).

The effects of the physician's actions extend to the hospital and the patient. The physician's documentation is the most fundamental element in determining hospital reimbursement. In the final analysis, it is the physician who determines the hospital's survival in the Medicare program. This requires time that could otherwise be applied to the art of medicine. Thus, even when the highest quality medicine is practiced, the patient may suffer because the personal part of the patient/physician relationship may be sacrificed for a more reasonably priced delivery system.

The physicians must consider the effects of the changes that are just ahead and reflect upon how important it will be for us to listen and to clear the air of misunderstandings. It would benefit us not to be pitted against each other or against the hospitals. A steady head, a little mutual understanding, and a lot of cooperation just may form the fulcrum that will keep medical peer review in balance with the practice of medicine.

Where we go from here and how well we orchestrate our diversified interests and personalities lie in our own hands and offer the greatest challenge of the '80s to Texas physicians.

ALLEN M. FAIN, MD
Chairman, Regional Medical Director, Texas Medical Foundation, 2700 Stemmons, Tower East #800, Dallas, TX 75207.

REFERENCES

1. Gasfield AG: Physicians and the peer review organization review. Quality Assurance and Utilization Review 1(2): 34, 1986.

2. Huge DS: Clean medical decisions seem to be the key. Quality Assurance and Utilization Review 1(2): 56, 1986.

DAVIS/BELZUNG
ARCHITECTS PLANNERS

DESIGN • REVIEW
TENANT REPRESENTATION
CONSTRUCTION SUPERVISION

FOR

CLINICS • MEDICAL FACILITIES

PRIVATE MEDICAL
SUITES AND OFFICES

PATIENT AREAS • X-RAY ROOMS
LABORATORY FACILITIES

As the lease on a 3,000 square foot office can be as much as $4,500.00 per month, office space can be one of the largest liabilities that you or any professional will incur. A three year lease at $4,500.00 per month equates to a liability burden in excess of $160,000.00.

Through careful design and space management the required space for your needs can often be reduced 10% or more. This alone could mean a savings of more than $16,000.00 in the previous example.

In addition, in many instances, through the use of competent space planning clerical staffing can be reduced by providing further savings. This can be done through designs that allow one person to perform several tasks in an efficient manner.

Most importantly when we work with you, it is with only your needs in mind not those of the realtor or building owner. This insures that no compromises are made that may affect the cost, size or quality of your investment.

Serving Austin, San Antonio and South Texas.

5719 Kenwick
San Antonio, Texas 78238
(512) 680-2840

1987 Calendar Of Workshops

Sponsored By The Texas Medical Association

For your information: This is your calendar of workshops and seminars sponsored by the Texas Medical Association during the remainder of 1987.

Keep this in a convenient place for easy reference. Tack it to your bulletin board! Please feel free to contact us when you have questions: **TMA Practice Management Workshops, 1801 North Lamar Blvd., Austin, Texas 78701, 512/477-6704, ext. 262.**

All workshop registration information will be mailed approximately six weeks prior to the scheduled time for each series.

How to Get Started in Medical Practice is a two-day series for physicians who plan to go solo, join a partnership or group practice, or need direction on which way to go. Concepts presented in this workshop will help avoid many medical practice management problems. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. No registration fee for senior residents currently enrolled in a recognized Texas residency program. Registration fee for others: TMA member, $115; non-member, $140.

Insurance Claims Preparation, Coding and Documentation is a half-day workshop that focuses on the "how-to's" of insurance claims preparation and coding with special emphasis on medical, surgical, and diagnostic coding. Workshop material includes sample claim forms and actual case histories from which to learn. Faculty: Harold Whittington & Associates, Dallas. Registration fee: TMA member, $75; non-member, $100.

How to Improve Your Third-Party Reimbursement is a half-day workshop presented in conjunction with the coding series described above. The series is designed to help physicians and their office staffs gain a better understanding of the Medicare/Medicaid reimbursement system and how to obtain appropriate third-party reimbursement. Faculty: Harold Whittington & Associates, Dallas. Registration fee: TMA member, $75; non-member, $100.

Medical Office Management Institute (MOMI) is a week-long series of in-depth programs specifically designed for medical office managers, supervisors and office staff. The one-day workshops include **Computers in Medical Practice, Patient Flow Management, Personnel Management, Personnel Problem Solving** and **Financial Management.** Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Registration fee: TMA member, $120 for each one-day workshop; $525 for all five workshops. Non-member, $155 for each one-day workshop; $700 for all five workshops.

The following county medical societies are participating as co-sponsors in the 1987 TMA practice management workshops and seminars:

Bexar County Medical Society
El Paso County Medical Society
Harris County Medical Society
Potter-Randall County Medical Society
Tarrant County Medical Society
Taylor-Jones-Haskell County Medical Society
Travis County Medical Society

How to Run A More Profitable Practice is an action-oriented workshop designed to give effective solutions to help the physician maximize revenues, minimize overhead, and make it all happen with a tested 31-step strategy. Topics include insurance billing methods, improving patient mix, PPO/HMO/IPA strategy, fee analysis, compensation formulas, overhead reduction options, how to get things done, role of the office manager, physician leadership, year-round planning, and do-it-yourself reports that every practice should have. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Registration fee: TMA member, $155; non-member, $175.

Personal Income and Estate Tax Planning is a two-day seminar for physicians and spouses to help them understand the fundamentals of tax planning and why prudent planning and management are so important. Faculty: Robert Jorrie, Jorrie, Archer, Standley, and Chovanec, Inc., San Antonio. Registration fee: TMA member, $220; non-member, $270. (There is no additional cost for spouse if physician attends.)

Increasing Your Net Worth Through Financial, Pension, and Investment Planning is a one-day seminar designed to acquaint physicians with techniques available under current law to establish the most effective business structure for their medical practice in order to minimize federal income tax liability, increase net worth, and create additional funds for practice development and growth. Faculty: Glazer, Suellentrop, and Associates, Inc., Dallas. Registration fee: TMA member, $170; non-member, $210. (There is no additional cost for spouse if physician attends.)

Gearing Up for Retirement is a one and one-half day seminar designed to assist physicians and their spouses in planning for a successful retirement. Seminar topics include closing a medical practice, legal and tax considerations, and optimizing retirement income. Registration fee: TMA member, $210; non-member, $250. (There is no additional cost for spouse if physician attends.)

1987 Workshop Schedule By Series

Workshop Series	Date	City
How to Get Started in Medical Practice (Conomikes Associates, Inc.)	November 11–12 November 13–14 November 18–19 November 20–21 December 2–3 December 4–5 December 8–9 December 10–11	Dallas El Paso Houston Lubbock Fort Worth Temple Houston San Antonio
Insurance Claims Preparation, Coding and Documentation (Morning) Harold Whittington & Associates) **and** **How to Improve Your Third-Party Reimbursement** (Afternoon) (Harold Whittington & Associates)	September 16 September 18 September 29 September 30 October 2 October 9 October 13 October 14 October 16	San Antonio El Paso Lubbock Midland Dallas Tyler Waco Fort Worth Houston
Medical Office Management Institute (MOMI) (Conomikes Associates, Inc.	August 3–7 August 24–28	San Antonio Dallas
How to Run a More Profitable Practice (Conomikes Associates, Inc.)	October 6 October 7 October 8 November 4 November 5	Houston San Antonio Austin Amarillo Dallas
Personal Income and Estate Tax Planning (Robert Jorrie)	November 7–8	Dallas
Increasing Your Net Worth (Glazer, Suellentrop, and Associates)	September 12 October 10	Austin San Antonio
Gearing Up for Retirement	October 23–25	Houston

TMA IN ACTION

TMA proposals impact AMA House of Delegates' actions

Principles adopted by the TMA House of Delegates had major impact on actions of the AMA House of Delegates at the June annual meeting.

Resolutions and recommendations from the Texas delegation especially influenced AMA policies on DRGs, Medicare revisions, federal peer review activities, changes in urban/rural differentials that affect rural hospitals, freedom of choice of private insurers, and AMA positions on recommendations contained in the Health Policy Agenda for the American People.

Stemming from TMA's role as a physician and patient advocate, the Texas resolutions dealt with opposition to physician DRGs, inherent unreasonableness of Medicare services, disclosure of information on unassigned claims, and closure of rural hospitals. Other resolutions dealt with the need to further revise the PRO sanction protocols to assure due process under the PRO Act, revise the regulatory notice of Medicare denials of payment provisions based on quality of care concerns, and the need to assure freedom of choice for patients whose employers provide only a health maintenance organization (HMO) plan for health insurance benefits. In addition, the TMA delegation presented the recommendations of the TMA House of Delegates on the 195 recommendations contained in the Health Policy Agenda.

The AMA House adopted the full body of two Texas resolutions: (1) notices of Medicare denials of payment based on quality of care concerns, and (2) freedom of choice of private insurers. The first resolution seeks to amend the Medicare law to eliminate the notice of Medicare denial of payment decisions based on adverse quality of care findings until after all review and appellate avenues are exhausted. The second resolution asks that AMA support legislation that would require an employer or union offering health insurance to its employees or members to provide a private insurance option in addition to other coverages offered.

With very minor amendments, the AMA House adopted the Texas resolution on closure of rural hospitals. The resolution calls for support of legislation that would provide more adequate reimbursement of rural hospitals under the Prospective Pricing System (PPS) by reducing the urban/rural differential.

A Texas resolution asking for due process amendments to the PRO Act was adopted with minor amendments by the AMA House. The Texas resolution had asked the AMA to seek amendments to the PRO law to provide for a review by an impartial panel of physicians prior to recommending sanctions; that the standard or level of care upon which the physician is judged be established by expert witness, recognized textbooks and journal articles, and other credible evidence, not by PRO panel members; that the physicians being reviewed be accorded the right to review all evidence; and that the decisions must be based solely on evidence presented at review proceedings. The AMA House observed that changes in the sanction process had been addressed recently in discussions between AMA and the Health Care Financing Administration (HCFA). Thus, the resolution was amended to recognize that these changes may be made not only through legislative channels, but also through other means of communication and intervention.

Resolutions embodying the principles in four other Texas resolutions were incorporated in substitute resolutions, which included concerns cited by representatives of other delegations throughout the country. These resolutions dealt with revision of the PRO sanction protocol, opposition to physician DRGs, inherent unreasonableness of fees charged for services rendered to Medicare beneficiaries, and disclosure of information of unassigned claims.

The Texas resolution on PRO sanctions was adopted in substitute form. The resolution calls for the AMA to seek amendments to the PRO Law, which would require that:

1. The definition of "gross and flagrant" be reviewed and modified to include only those violations that cause the PRO to conclude that the continuation of medical practice by the physician would constitute an immediate danger to the health, safety, or well-being of Medicare beneficiaries; and

2. If an "imminent hazard" to the health and welfare of Medicare beneficiaries exists, a special expedited hearing process be statutorily created to allow physicians under review to have a hearing prior to, if possible, or immediately after a sanction decision to exclude the practitioner from the Medicare program.

The Texas resolution on DRGs called for continued AMA opposition to any physician DRG proposal. The AMA resolution incorporated this principle, called for the AMA to encourage members of Congress to support Resolution H30 and S15, which oppose the inclusion of physicians in any DRG program, and to ask AMA through its physician members to seek support of patients in opposing the inclusion of physicians in the DRG reimbursement plans.

The AMA also adopted the principle contained in the Texas resolution on "inherent unreasonableness" on Medicare services. In its substitute resolution, the AMA delegates asked that the AMA review the recent legislative provisions that empower the Secretary of Health and Human Services to apply "inherent reasonableness" criteria to physician payments and fees under Medicare and to attempt to secure warranted legislative changes. In addition, the AMA opposed any arbitrary or inappropriate use of "inherent reasonableness" criteria for determining Medicare reimbursement levels.

A Texas resolution seeking to amend a Medicare disclosure of financial information requirement when treating patients who submit unassigned claims had called on the AMA to seek repeal, prior to implementation, of this requirement in the Omnibus Budget Reconciliation Act of 1986. Specifically, the federal requirement calls for nonparticipating physicians who perform elective surgery on an unassigned basis to provide the beneficiary with a written estimate of potential beneficiary liability. The AMA House of Delegates incorporated this principle in a new resolution that calls for the AMA to seek to rescind, before its effective date of Oct 1, 1987, the Omnibus Budget Reconciliation notice provision. The resolution also asks that the AMA advise

Quality does not just happen...

ABOUT YESTERDAY

Since 1955, your Texas Medical Association has sponsored an Insurance Program as a service to its members. It is a responsibility your Association takes seriously. The Program's primary goal has always been—to provide the best coverage at the lowest possible cost. Through the years, the Program has been expanded to meet the needs of its members. This has resulted in the advanced offerings we have today.

ABOUT TODAY

And today, we doubt if your Program can be beat. The cost, in relation to benefits, makes your Program "the Competition." Of course, a good program without good service is of no value to its members. That is why your Association has a salaried staff working to assist you. The staff works in your best interest—whether it concerns enrollment, service or claims.

...AND TOMORROW

The Insurance Trust maintains an independent actuary to advise and guide us. As inflation continues to rise, maximums have been increased to cope with tomorrow's insurance requirements. We are planning with accountability to you in mind. Even though we cannot solve all the problems that arise in a given period of time, we think our efforts prove—we are always working in your best interests.

Your Committee on Association Insurance Programs meets at least three times annually to carefully analyze premium income, claim payments, reserve funds, enrollment and service. As we strive to serve you, you can help by giving us your comments—questions—suggestions. Call or write—better yet, attend one of our meetings. All lines of communication are open.

Committee on Association Insurance Programs
Ronold J. Pinkenburg, M.D., Chm.
Robert A. Dennison, M.D.
Albert E. Gunn, M.D.
Charles F. Hendler, M.D.
Lorry J. O'Brien, M.D.
Shirley Molenich, M.D.
Pedro DeLeon, M.D.
Henry A. Dunzi, M.D.
James R. Sowyers, M.D.
Mrs. Thomas G. Gloss, Aux. Rep.

for information, contact

TEXAS MEDICAL ASSOCIATION INSURANCE PROGRAM

1901 NORTH LAMAR BOULEVARD AUSTIN, TEXAS 78705
CALL TOLL FREE: 1-800-252-9318

- *Long Term Disability Income*
- *Life Insurance*
- *Major Medical*
- *Office Overhead*
- *Personal Accident*

underwritten by

PRUCO LIFE INSURANCE COMPANY OF TEXAS
A Subsidiary of The PRUDENTIAL

its members that the decision of whether to be a "participating" physician in Medicare is a personal choice; that the AMA use all appropriate means to rescind recently enacted regulations and statutes, which unfairly discriminate against health care providers and jeopardize the quality, availability, and affordability of health care for the aged and infirm; that the AMA request Congress to return to the original intent of the Medicare Law, that Congress rescind the "incentive" in the budget reconciliation act regarding hospital referral of Medicare patients to participating physicians, and that AMA work to amend the Medicare law to eliminate any financial incentives to Medicare carriers for signing up large numbers of physician providers.

In other action, the Texas delegation presented recommendations on all of the 195 recommendations contained in the Health Policy Agenda for the American People. Texas recommendations influenced AMA policy in a number of policy decisions. Although the Health Policy Agenda stands alone as a consensus document of 172 national organizations, and AMA policy concurred with the majority of these positions, the delegates voted to vary with the national document in several positions. Mylie Durham, MD, Houston, chairman of the Texas Delegation to the AMA, served as chairman of the AMA reference committee that reviewed the document.

DRGs, generic drugs, tobacco on AMA House agenda

The AMA House of Delegates took a strong stand against any proposal that would reimburse physicians according to diagnostic related groups (DRGs), addressed issues of bioequivalence/therapeutic equivalence of generic drugs, and approved several proposals designed to reduce the use of tobacco.

As a result of the many actions of the House at its June 21–25 meeting in Chicago, the AMA will:

—Oppose any proposal that would reimburse physicians according to DRGs, oppose inclusion of radiologists, anesthesiologists, and pathologists under in-hospital DRGs, encourage congressmen to oppose inclusion of physicians in any DRG program, and seek support of patients to oppose such inclusion.

—Emphasize the need for a comprehensive approach to correcting the objectionable features of the Medicare law which unfairly discriminate against physicians. Participation for physicians should be a personal choice.

—Continue to seek judicial, legislative, and regulatory changes that will eliminate the Medicare maximum allowable actual charge (MAAC) regulations for nonparticipating physicians, and, in the meantime, seek to assure that all Medicare fiscal intermediaries send nonparticipating physicians adequate information for calculating MAAC levels.

—Urge all physicians to share in the care of indigent patients.

—Support legislation that would exempt from, or more adequately reimburse, rural hospitals under the Medicare Prospective Pricing System by reducing the urban/rural differential, and work with HCFA toward more appropriate application of Medicare Conditions of Participation to rural hospitals.

—Urge medical staffs to establish and incorporate into their medical staff bylaws policies covering the management and maintenance of credentials files, and encourage medical staffs to develop credentials files policies suited to specific conditions at each hospital.

—Recommend prescribing practices for generic drugs to diminish the likelihood of problems with lack of bioequivalence or therapeutic equivalence: (1) Titration of dose of any medication for optimum efficacy and safety, especially in patients with chronic disorders who require prolonged therapy or in those not expected to respond to a drug in a normal manner. (2) When multiple refills for chronic diseases are anticipated for drug products approved before 1962, the physician should avoid substitution unless the products have been proven to be bioequivalent. Once a medication has been prescribed, no further "generic" substitution should be made. (3) Physicians should document and report to the FDA serious or unusual problems related to drug substitution.

—Work with other groups to develop a simple coding system identifying active ingredients in each generic prescription drug, and to develop a means of putting the code on the drug when feasible.

—Discourage nonmedical use of drugs by athletes.

—Urge state medical societies to work to eliminate religious exemptions in mandatory immunization statutes, and call for physicians and medical and public health groups to work with religious groups and others to make known the risks of refusal to accept immunizations.

—Study the efficacy of school-based health clinics and community-based adolescent clinics.

—Support legislation setting the minimum age for purchasing tobacco products at age 21.

—Develop model legislation on enforcement of laws restricting children's access to tobacco.

—Support efforts to ban cigarette smoking on all commercial passenger aircraft.

AMA favors Texans running for elective office

The American Medical Association House of Delegates favored two Texas physicians running for elective office during the association's annual meeting. Incumbent AMA Board of Trustees member Joseph T. Painter, MD, Houston, was elected to a new three-year term, and Jack Chisolm, MD, Dallas was elected to the AMA Council on Constitution and Bylaws.

In the Resident Physician Section (RPS), Edward R. (Randy) Eckert, MD, a leave-of-absence member of TMA residing in New Orleans, became chairman of the RPS. Clifford Moy, MD, Dallas, was elected RPS secretary, and Charlotte Hoehne, MD, Houston, was elected to serve as the section's alternate delegate to the AMA House of Delegates. Thus, Texans hold three of the seven seats on the RPS governing council.

Joe Prud'homme, Baylor College of Medicine, Houston, was elected to serve as the Medical Student Section's alternate delegate to the AMA House.

"Target Tomorrow" focuses on new members under 40

Texas Medical Association is encouraging members to "Target Tomorrow" and re-

cruit at least 500 new members from a pool of almost 3,500 nonmember physicians under 40 years of age. Physicians who successfully recruit new members are eligible to win a Caribbean cruise for two.

The association's first outreach program focuses on the leaders of tomorrow, thus ensuring the continuation of a strong, viable association. The peer-to-peer membership campaign continues through Dec 31, 1987. New members must join by Feb 29, 1988, for the recruiter to have his or her name entered in a drawing for the cruise.

Individual physicians and county medical society delegations to TMA's House of Delegates who recruit the largest percentage of potential members and the largest number of new members will receive plaques. For this competition, counties are divided into six categories based on the size of the nonmember population and the number of county medical society delegates.

Further information on "Target Tomorrow" is available from Pamela C. Padgett, Director of Membership, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

PDQ use eligible for Category 1 credit

Physicians and physicians' assistants now may receive hour for hour continuing medical education (CME) credit for personal online use of the Physician's Data Query (PDQ). This interactive, computerized cancer information system also is available without credit through Texas Medical Association's Memorial Library.

Online use of the system meets the criteria for credit under Category 1 of the American Medical Association Physician's Recognition Award. Persons wishing to register for CME credit must submit copies of their PDQ CME evaluation every six months.

Developed by the National Cancer Institute, the PDQ database consists of three component files: a cancer information and treatment file, a directory of physicians and organizations providing cancer care, and a file of ongoing treatment protocols. The PDQ database is menu-driven, which makes it a "user-friendly" system for individuals who are inexperienced at using computers for online information searching.

Further information on PDQ is available from the Memorial Library, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

Association offers tapes of medical/legal symposium

Audiocassette tapes of Texas Medical Association's Symposium on Medicine and the Law are available for purchase from the association.

The symposium was presented by the Committee on Liaison with the State Bar of Texas during the association's May annual session in Houston. The recorded presentations address "HMOs and PPOs and Legal Concerns with 'Contract Medicine,'" "Workers' Compensation Issues," "How Doctors Deal with Attorneys," "The Physician in Court—A Trial Judge's Perspective," "Malpractice Crisis—Affordability/Availability," and "Legal Issues in Hospital Credentialling and Peer Review Proceedings."

Each tape costs $7.95 plus 7% sales tax. Further information is available from Linda Kuhn, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704, ext 141.

Amendment authorizes delegate from Young Physician Section

The agenda for the Nov 20–21, 1987, meeting of Texas Medical Association's House of Delegates includes final consideration of a constitutional amendment authorizing a delegate from the Young Physician Section to be seated in the house.

The proposal amends the Constitution, Article V, House of Delegates, Section 2, by addition as follows:

"Sec 2. The membership of the House of Delegates shall consist of (1) Delegates, elected in accordance with this Constitution and Bylaws, and ex officio: . . . (11) the delegate from the Young Physician Section. . . ."

The House of Delegates approved the formation of a Young Physician Section and gave "first reading" approval to the proposed amendment in May 1987.

The section's membership will include physicians who are younger than age 40 or in their first five years of practice after resident and/or fellowship training. TMA's Board of Trustees endorsed the formation of the section, describing it as a progressive step that has the potential of increasing membership and providing an organizational mechanism for young physician members to influence the programs and policies of the association.

HEALTH LINE

Delegates address issues related to AIDS

Noting that "the growing AIDS crisis is one of the crucial public health problems facing the nation" and expressing its "overriding concern for a judicious balance between the well-being of HIV positive patients and the protection of the public health," the American Medical Association has adopted 17 recommendations and three resolutions that address issues related to acquired immune deficiency syndrome.

The bulk of the AIDS platform came from a report of the AMA Board of Trustees, which carried the support of C. Everett Koop, MD, Surgeon General of the United States. The association's House of Delegates considered the report during its annual meeting June 21–25 in Chicago. The board's recommendations, which were adopted in amended form, address the need for a national policy on AIDS, the special role of physicians and other health care counselors, resources, and questions for the future.

The delegates supported mandatory AIDS testing for donors of blood and blood fractions, organs and other tissues intended for transplantation in the United States or abroad, for donors of semen or ova collected for artificial insemination or in vitro fertilization, for immigrants to the United States, and for military personnel. To facilitate planning for the future, the delegates approved the board's call for an ongoing national study to determine the prevalence and

conversion rate of the virus in the US population.

Another recommendation calls for statutes that (a) provide a method for warning unsuspecting sexual partners, (b) protect physicians from liability for failure to warn an unsuspecting third party but (c) establish clear standards for when a physician should inform public health authorities, and (d) provide clear guidelines for public health authorities who need to trace the unsuspecting sexual partners of an infected person. The report also asks that consideration be given to sanctions, "at least in circumstances where an unsuspecting sexual partner subsequently finds out about a partner's infection and brings a complaint to the attention of authorities."

After considering at least 13 resolutions addressing AIDS, the delegates adopted three. Substitute Resolution 173 asks the association to provide guidelines that "would enable physicians caring for patients with a positive HIV test to discuss with legal immunity and in a confidential manner these patients with other health care professionals who are also involved in their care . . . ." Substitute Resolution 18 asks the association to institute an AIDS public awareness and information program and endorse the education of elementary and young adult students about the mode of transmission and prevention of transmission of HIV.

In Substitute Resolution 29 the association endorses the use of condoms as one useful measure in attempting to contain the spread of the HIV virus, and commits to investigate the possibility of cooperation in setting up a foundation or coalition with the public health community and/or government agencies for the purpose of developing standards and producing tasteful public service announcements regarding condom use in limiting AIDS and other sexually transmitted diseases.

Prevention of TB in jails subject of TDH guidelines

The Bureau of Communicable Disease Services, Tuberculosis Control Division, of the Texas Department of Health (TDH) has developed "Guidelines for Prevention of Tuberculosis Transmission in City and County Jails."

"Undiagnosed tuberculosis disease or development of tuberculosis from latent infection with subsequent spread of infection to uninfected contacts poses a significant threat to jail employees, inmates, and visitors," reports the department. "Recent studies have documented that relatively high rates of tuberculosis infection and disease are not uncommon within the jail environment." The report recommends that jail employees be screened before employment and inmates screened upon incarceration if they are to be held ten or more days.

Included in the report are the guidelines on management of inmates with productive cough, preventive treatment for employees and inmates, reporting of all suspected or diagnosed cases of tuberculosis, and precautions necessary to prevent the transmission of the disease.

Copies of the guidelines are available upon request from the TDH Tuberculosis Control Division, 1100 W 49th St, Austin, TX 78756–3180, phone (512)458–7447.

Breast screening project prompts unprecedented response

At press time, more than 100,000 Texas women had called the American Cancer Society (ACS) hot lines to participate in the society's Texas Breast Screening Project.

"We're overwhelmed—and ecstatic—at the response," said George N. Peters, MD, a surgeon at Baylor University Medical Center in Dallas and volunteer chairman of the project. "Although Texas was not the first state to launch this type of screening project, we've certainly done it on a much larger and more comprehensive scale," he said.

During the project, more than 5,000 volunteers staffed phone banks in 32 Texas cities to determine the callers' eligibility for the project. Eligible callers, women 35 or older who had no breast cancer symptoms, received a coupon entitling them to a $50 mammogram from local participating facilities.

Initial planning for the Texas Breast Screening Project began two years ago, when ACS volunteers sought the cooperation of hospitals and screening facilities throughout the state to offer screening mammograms for a cost of no more than $50 for a limited time in the spring of 1987. More than 300 facilities agreed to participate in the project.

By offering the mammograms at a reduced cost and with an extensive awareness campaign for all methods of early breast cancer detection, the Texas Breast Screening Project was designed to convince women to include mammography as part of their routine health plan.

The American Cancer Society recommends a screening baseline mammogram for women between the ages of 35 and 40 and then every year or two years between the ages 40 and 50. After age 50, women are encouraged to have a mammogram every year. Women with a personal or family history of breast cancer should consult their physicians about how often they should be examined and have a mammogram before age 40. The society also recommends monthly breast self-examination for women 20 and older and an annual physical breast examination by a trained health professional.

Final results of the project, including the actual number of women screened and cancers found, will be available in September, when participating facilities are to report their findings.

SOCIOECONOMICS

Poll asks who's to blame for high liability premiums

More than one quarter (27%) of adult Americans blame patients for the rapidly increasing price of medical professional liability insurance in the United States, according to a poll conducted by SRI Gallup. The poll also shows that more than half of the Americans blaming patients (14%) say the claims are not legitimate. "The average American believes that only 29% of medical malpractice suits have legitimate grounds for complaint," according to SRI Gallup senior vice president Steven R. Steiber, PhD.

The poll indicates that 17% of Americans believe that attorneys precipitate the liability problem. Thirteen percent

American Physicians Insurance Exchange

MALPRACTICE

It's an allegation that can happen to anyone.

You don't have to stand alone!

We wrote the book on malpractice insurance. We started writing professional liability insurance over 12 years ago, when the other insurance companies were looking for a way out.

Why? Because we're 100% owned and controlled by dentists and physicians. We know you can't operate your practice without malpractice insurance.

We know a good insurance company must insure *all* specialties. And we have never settled a claim without an insured's written consent. We believe that you shouldn't have to stand alone. If you're concerned about your insurance company's commitment to you, give us a call today.

api

1301 Capital of Texas Highway, Suite #B-300
Austin, Texas 78746
(512) 328-1520

Nationwide 1-800-252-3628

In San Antonio:
Bill Sweet
(512) 497-3205

blame physicians' negligence, and 9% blame the insurance industry. Only 1% say hospitals are at fault. Another 23% of Americans "don't know" whom to blame for the medical malpractice crisis.

Older and higher-income Americans tend to think fewer malpractice cases are justifiable, "but no distinct group is overly sympathetic to those involved in these suits. Women, younger, or higher income Americans more readily fault 'money-grabbing' patients. Men tend to point the finger at lawyers more often than women, and more educated Americans fault insurance companies for the current medical malpractice crisis," Steiber said.

SRI Gallup, an opinion research consulting firm devoted to the health care industry, is a joint venture of Selection Research, Inc, and The Gallup Organization. The telephone survey of 997 adult Americans nationwide was conducted in March 1987. It has a margin of error of ±3.1%.

St Paul reports claims against emergency physicians

Failure to diagnose fractures and dislocations was the single largest category of professional liability claims against emergency medicine physicians from May 1982 through December 1985, according to a report from the St Paul Fire and Marine Insurance Company. The study also reveals that failure to diagnose myocardial infarction resulted in the highest average cost per claim during the same time period.

A chart published in the Spring 1987 *Malpractice Digest* shows that failure to diagnose fractures and dislocations accounted for 19.3% of claims at an average cost of $19,861. Claims of failure to diagnose myocardial infarction cost an average of $72,775. Improper treatment during examination was the smallest claim category, accounting for 2.7% of actions and costing an average of $21,931. Failure to diagnose a foreign body accounted for 5.5% of actions and cost $3,527 per claim, the smallest average cost.

Other claims against emergency medicine physicians included failure to diagnose infection, 5.7% at an average cost of $51,062; failure to diagnose appendicitis, 3.9% at $15,589; failure to diagnose other abdominal problems, 3.2% at $15,518; improper treatment of infection, 3.1% at $15,057; failure to diagnose hemorrhage, 2.9% at $46,683; failure to diagnose tendon laceration, 2.8% at $19,280.

The average cost for claims includes total amount paid and reserved, plus allocated legal expense. The average reflects all claims reported in 1981–1985, including those closed without payment.

AMA House proposes changes in PRO law

Recommendations designed to alleviate problems with the peer review organizations (PROs) were among the actions of the AMA House of Delegates at its June meeting. Most of the actions seek changes in the PRO law, policies, and procedures, and call for the AMA to:

—Urge federal agencies to stress education of physicians toward higher quality and cost-effective practice in its operation of the peer review organization and prospective pricing system.

—Seek amendments to PL 97-248 (PRO) to require that (a) definition of "gross and flagrant" be reviewed and modified to include only those violations that cause the PRO to conclude that the continuation of medical practice by the physician would constitute an immediate danger to the health, safety, or well-being of Medicare beneficiaries; and (b) if an "imminent hazard" to the health and welfare of Medicare beneficiaries exists, a special expedited hearing process should be statutorily created for immediate action before, if possible, or immediately after a sanction decision.

—Seek changes in the PRO law to provide for a review by an impartial panel of physicians before recommending sanctions; that the standard or level of care upon which the physician is judged is established by expert witness, recognized textbooks and journal articles, and other credible evidence, not by PRO panel members; that the physician being reviewed be accorded the right to review all evidence; and that the decision be based solely on evidence presented at review proceedings.

—Seek amendment to the Medicare law to eliminate the notice of medical denial of payment decision based on adverse quality of care findings until after all review and appellate avenues are exhausted.

—Continue to monitor PRO activities, continue to encourage physicians to report their concerns with PRO to the AMA PRO monitoring project and to state medical associations, and continue such appropriate activities to assure basic fairness to patients and physicians in the administration of the PRO program.

—Seek changes in PRO policy to assure that physicians who review records provide signed attestation that a complete review was performed, and that in cases of PRO denial, an appropriate specialist or subspecialist peer will review the case.

—Seek extensive modification of the HCFA generic screens.

JCAH to require policies on DNR orders in 1988

Beginning Jan 1, 1988, the Joint Commission on Accreditation of Hospitals will require health care organizations to have in place policies concerning withholding resuscitative services to patients. Acceptable policies must include " . . . a requirement that appropriate orders be written by the physician primarily responsible for the patient and that documentation be made in the patient's medical record if resuscitative services are to be withheld."

"These new standards reflect a need for health care organizations to address the complex medical, ethical, and legal ramifications of withholding resuscitation and to formulate rational, formal policies," Joint Commission president Dennis S. O'Leary, MD, said. "The new standards ask facilities to examine the decision-making process and the roles of physicians, nurses, and other professionals in this process."

Specifically, the standards require that each policy "is developed in consultation with the medical staff, nursing staff, and other appropriate bodies and is adopted by the medical staff and approved by the governing body."

A study conducted by the Joint Commission in 1986 showed that only 59%

A Referral Center for Cardiopulmonary Diseases

Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

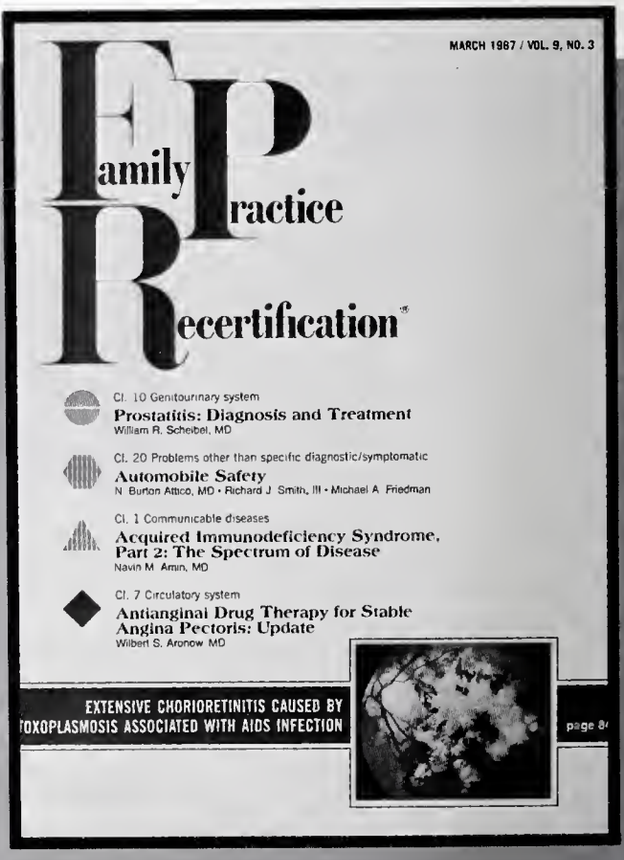
Located on Highway 271 at SH 155, 5 miles north of Tyler, Mailing address:
P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

  Cardiology — Ob/Gyn
  Diabetes — Psychiatry
  Pediatrics — Gastroenterology

- Provides 20 hours of CME Category 1 Credit


MARCH 1987 / VOL. 9, NO. 3
Family Practice Recertification
Cl. 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Scheibel, MD
Cl. 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Attico, MD • Richard J. Smith, III • Michael A. Friedman
Cl. 1 Communicable diseases
Acquired Immunodeficiency Syndrome, Part 2: The Spectrum of Disease
Navin M. Amin, MD
Cl. 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD
EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

Depressed and anxious, she's sitting out life instead of living it

From "looking"...

ROCHE® Copyright © 1987 by Roche Products Inc. All rights reserved.

FOR FAST RELIEF OF MODERATE DEPRESSION AND ANXIETY

See the difference in the first week[1]

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

PROTECT YOUR DECISION. WRITE "DO NOT SUBSTITUTE."

Please see summary of product information on adjacent page.

FROM LOOKING...TO LIVING...

to smiling again!

The rewards of Limbitrol

in moderate depression and anxiety:

- Rapid results—62% of total four-week improvement within a week versus 44% with amitriptyline[1]
- Earlier relief of associated somatic complaints[2]
- Fewer dropouts due to side effects—only ⅓ the rate of those patients taking amitriptyline, although the incidence of side effects is comparable[1]
- Fast improvement with less amitriptyline—⅓ to ½ the dose of patients taking amitriptyline alone[3]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

SEE THE DIFFERENCE IN THE FIRST WEEK[1]

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

PROTECT YOUR DECISION. WRITE "DO NOT SUBSTITUTE

References: 1. Feighner JP, *et al: Psychopharmacology* 61 217-225, Mar 22, 1979 **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Dixon R, Cohen J: *J Clin Psychopharmacol* 3:107-109, Apr 1983.

Limbitrol® (IV)
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmia, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: *Double strength (DS) Tablets*, white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets*, blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE®
ROCHE PRODUCTS INC.
Manati, Puerto Rico 00701

P.I. 0

Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

Vicodin®

hydrocodone bitartrate 5 mg. (Warning May be habit forming) with acetaminophen 500 mg

The original hydrocodone analgesic.

Specify "Dispense as written" for the original hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. 5685

1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med,* 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

© 1986, BASF K&F Corporation

5768/9-86 Printed in U.S.A.

vicodin® III

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

of 1,223 acute care hospitals, long term care facilities, psychiatric hospitals, and hospices had DNR policies.

The JCAH Board of Commissioners adopted the new DNR policy during its April meeting. At the same meeting, the board approved new or revised language in the standards on surgical and anesthesia services and standards on the use of reference laboratories. Updated versions of the *Accreditation Manual for Hospitals* and the *Consolidated Standards Manual*, which contain the new language, will be available in August.

CAPITAL COMMENTS

Liability bills await hearings in Congressional committees

At press time, modified versions of the American Medical Association's proposals to encourage states to enact specified or innovative approaches to alleviate the professional liability crisis were pending in Congressional committees. Consumed with budget reconciliation activities, the committees have not yet scheduled hearings on the proposed legislation, which also was considered in the previous Congress.

In this Congress, Sens Orrin Hatch (R-Utah) and Daniel Inouye (D-Hawaii), and Chic Hecht (R-Nev) introduced S 1315, the "National Professional Liability Act of 1987." Rep Norman Lent (R-NY) introduced the companion bill in the US House of Representatives, HR 1955. He is joined by ten original cosponsors.

S 1315 and HR 1955 would make available up to $118 million in fiscal year 1988 developmental and incentive grants to those states that adopted suggested reforms or other innovative approaches intended to ease the worsening professional liability burden.

Among the reforms that would qualify for grants are:

—Arranging periodic payments when damages exceed $100,000

—Eliminating the collateral source rule

—Limiting damages for pain and suffering, as well as for punitive damages, to $250,000

—Limiting attorneys' fees (on a declining basis based on the amount of awards) so that injured parties would receive a larger share of rewards.

S 1315 has been referred to the Senate Committee on Labor and Human Resources, and HR 1955 has been referred to the House Committee on Energy and Commerce.

NEWSMAKERS

ROGER D. SOLOWAY, MD, has been named chief of the division of gastroenterology, department of medicine, at The University of Texas Medical Branch at Galveston. Dr Soloway has been a member of the faculty at the University of Pennsylvania since 1967.

BETTY PFEFFERBAUM, MD, has been named an associate vice president at The University of Texas Health Science Center at Houston. Dr Pfefferbaum joined the medical school faculty in 1978 and since 1983 she has been director of the division of child psychiatry. She also is an associate psychiatrist and associate professor of pediatrics at the UT System Cancer Center. As an associate vice president, Dr Pfefferbaum will direct the activities of the office of educational services, interprofessional education, and international programs.

THOMAS D. CRONIN, MD, Houston, has been honored by the Texas Society of Plastic Surgeons with the Distinguished Service Award. In addition, the society established the Thomas D. Cronin, MD, Award for the best paper presented by a resident in plastic surgery. The first award will be presented during the society's 1988 annual meeting in San Antonio. Dr Cronin is associate professor of plastic surgery at Baylor College of Medicine and clinical associate at The University of Texas Medical School.

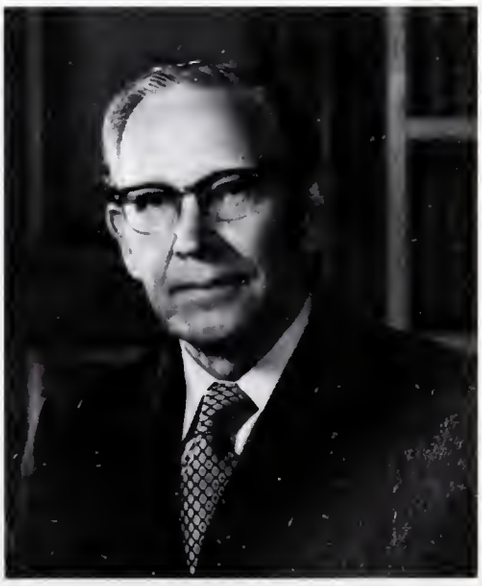
FRANK BRYANT, JR, MD, San Antonio, a past president of the Bexar County Medical Society, has been appointed chairman of the Texas Board of Health. RALEIGH R. WHITE IV, MD, Temple, has been appointed vice chairman of the board.

STEVEN SCHENKER, MD, San Antonio, has received the Award for Research Excellence from the Research Society on Alcoholism. Dr Schenker is professor of medicine and pharmacology and division chief of gastroenterology and human nutrition at The University of Texas Health Science Center at San Antonio. His studies have contributed to understanding hepatic coma in alcoholics with cirrhosis, proper use of drugs in patients with severe alcoholic liver disease, the effects of alcohol on metabolism of vitamins, fetal alcohol syndrome, and the effects of alcohol on liver growth.

NANCY DICKEY, MD, a Richmond family physician and vice-president of the Texas Medical Association, is the first recipient of the Distinguished Alumni Award from The University of Texas Medical School at Houston. Dr Dickey, a clinical instructor in the department of family practice and community medicine at the medical school, has been practicing medicine in the Richmond-Rosenberg area since she completed her residency at UT in 1979.

JOHN D. MILAM, MD, Houston, has been elected president of the American Blood Commission. Dr Milam is the director of pathology at St Luke's Episcopal Hospital.

Thomas D. Cronin, MD



JOEL D. HOLLIDAY, DO, Mesquite, has been named president of the Texas State Board of Medical Examiners. Dr Holliday formerly served as vice president of the board.

ELLIS McGEE, MD, a family physician, was honored by the citizens of New Boston, Tex, for his 50 years of medical service. Dr McGee's father practiced medicine in the community for 51 years; the two doctors provided more than 100 years of medical service to the town of New Boston.

KAREN R. HITCHCOCK, PhD, associate dean for basic sciences, research, and graduate studies and professor of cell biology and anatomy at Texas Tech University Health Sciences Center School of Medicine, was elected a member-at-large of the National Board of Medical Examiners.

EDWARD S. RAPPAPORT, MD, head of the Scott & White Memorial Hospital's hematology section and associate professor at Texas A&M University College of Medicine, has been named outstanding clinical faculty member by the Southwest Texas State University departments of allied health sciences and health administration.

TERRY TUBB, MD, a plastic and reconstructive surgeon in private practice in Midland, was named a 1987 Distinguished Alumnus of South Plains College in Levelland, Tex.

R. PALMER BEASLEY, MD, has been chosen dean of The University of Texas School of Public Health in Houston. Dr Beasley currently is professor of medicine and head of the division of communicable disease epidemiology at the University of California in San Francisco. He also is director of the American University Medical Center in Taipei, Taiwan.

BEVERLY RIPPLE DICKERSON, Houston, has been awarded the 1986–1987 Distinguished Member Award by the Texas Medical Record Association. Ms Dickerson has served as director of medical records at Hermann and Sam Houston hospitals, chairman and assistant professor at The University of Texas Medical Branch at Galveston, and most recently, vice president of physician affairs at Hermann Hospital.

SHARE DATA BY NETWORKING YOUR PCs

Your staff can perform more efficiently by:

- **Sharing data** from certain selected files,
- Sharing **expensive peripheral equipment,** and
- Sending **electronic mail** to other PCs.

Networking PCs is simple. It takes an interface card, called ARC-CARD, in each PC; a cabled network called ARCNET; and an operating system software called NETWARE. That's it: ARC-CARDs, ARCNET, NETWARE.

The installation takes about two hours. It consists of cabling the PCs together, plugging the ARC-CARDs into them and loading the Novell software onto a hard disc in the PC acting as a file server.

The rest is amazing. When your staff members start using the networked PCs, they'll think they are using a mini computer. That's the capability you get by networking your PCs. And it's yours for only a fraction of the cost. Try it. You won't return it. Your staff won't let you!

VESTRA · SUBCO, INC.

For an ARC-CARD dealer near you, call **(817) 771-2124** or write 1402 W. Adams Ave., Temple, Texas 76501. Telex 350015 VESTRA AUS.

Understanding the hows and whys of issues facing the medical profession—not just knowing what they are—enables you to take an informed, effective course of action.

TMA's Fall Conference will examine the rapidly changing environment faced by Texas' physicians, and the role of physicians in acting to protect or defend what is in the patient's best interest.

The program includes notable speakers, panel sessions, postgraduate courses, a Friday evening pre-conference marketing workshop, and a Sunday morning post-conference session on Medicare reimbursement.

Mark your calendar now and watch your mail for more details about Advocacy '87/Speaking Out on the issues.

Texas Medical Association 1987 Fall Conference

Saturday, September 26, 1987
8:30 a.m.–5 p.m.
Hyatt Regency Austin

NOVOSTI—GAMMA/LIAISON

Soviets downplay Chernobyl.
U.S. maintains the disaster was catastrophic.

If the press didn't tell us, who would?

To get printed information on the role of a free press and how it protects your rights, or to discuss any free press issue, call the First Amendment Center at 1-800-542-1600.

A public service message of this publication, The Ad Council and The Society of Professional Journalists.

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS MEDICAL LIABILITY TRUST

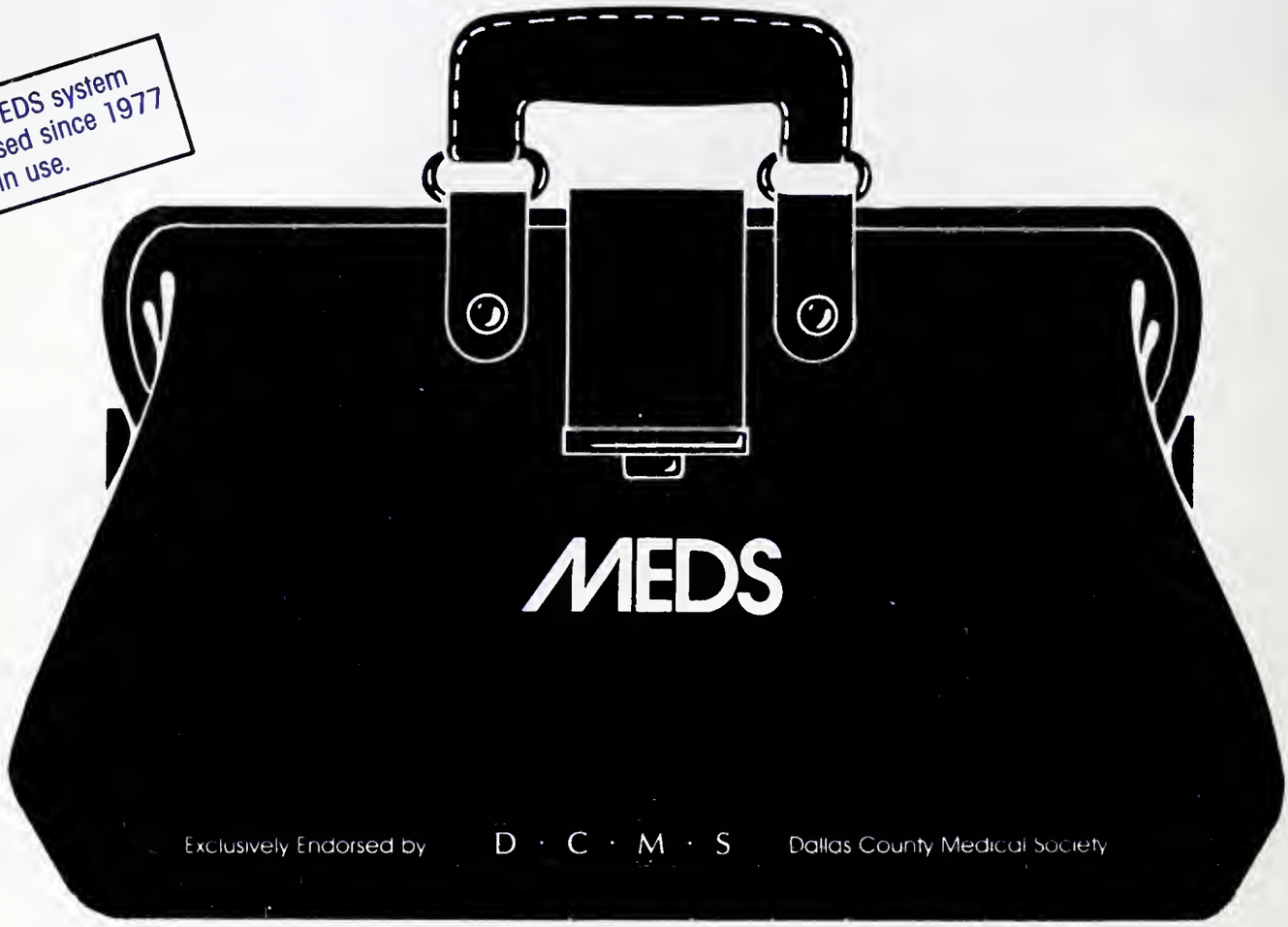
THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

Physicians Computerized Office Management System

WE MAKE HOUSE CALLS

Every MEDS system purchased since 1977 is still in use.



MEDS will individually tailor an Office Management system to fit your practice needs. Texas based, MEDS has been satisfying the data processing needs of physicians across the Southwest for over eight years. MEDS systems help simplify and streamline the increasingly complex problem of managing your practice. Contact us so that we can show you all the ways your practice can benefit from a system of your own.

MEDS PROVIDES

- Electronic claims submissions
- State of the art hardware
- Ongoing service, support and training
- Patient scheduling and recall
- Insurance filing and tracking

MEDS

Medical Data Systems, Inc.
Corporate Office Dallas
Ten Thousand North Central Suite 1000
Dallas, Texas 75231

In Texas call toll free 1-800-272-MEDS
Nationwide call toll free 1-800-922-MEDS
Dallas/Fort Worth Metro call 263-9812

San Antonio Office
15600 San Pedro Suite 301
San Antonio, Texas 78232
(512) 490-0322

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH

INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD
John W. Kirk, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Daniel E. Whitman, MD

GERIATRICS
Eugene M. Hoyt, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
James V. Ryan, MD

NEPHROLOGY
Fernando Raudales, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

NUCLEAR MEDICINE
William L. Hinds, MD
C. P. Eldridge, MD
Joe B. Wilson, MD
Richard J. Frachtman, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

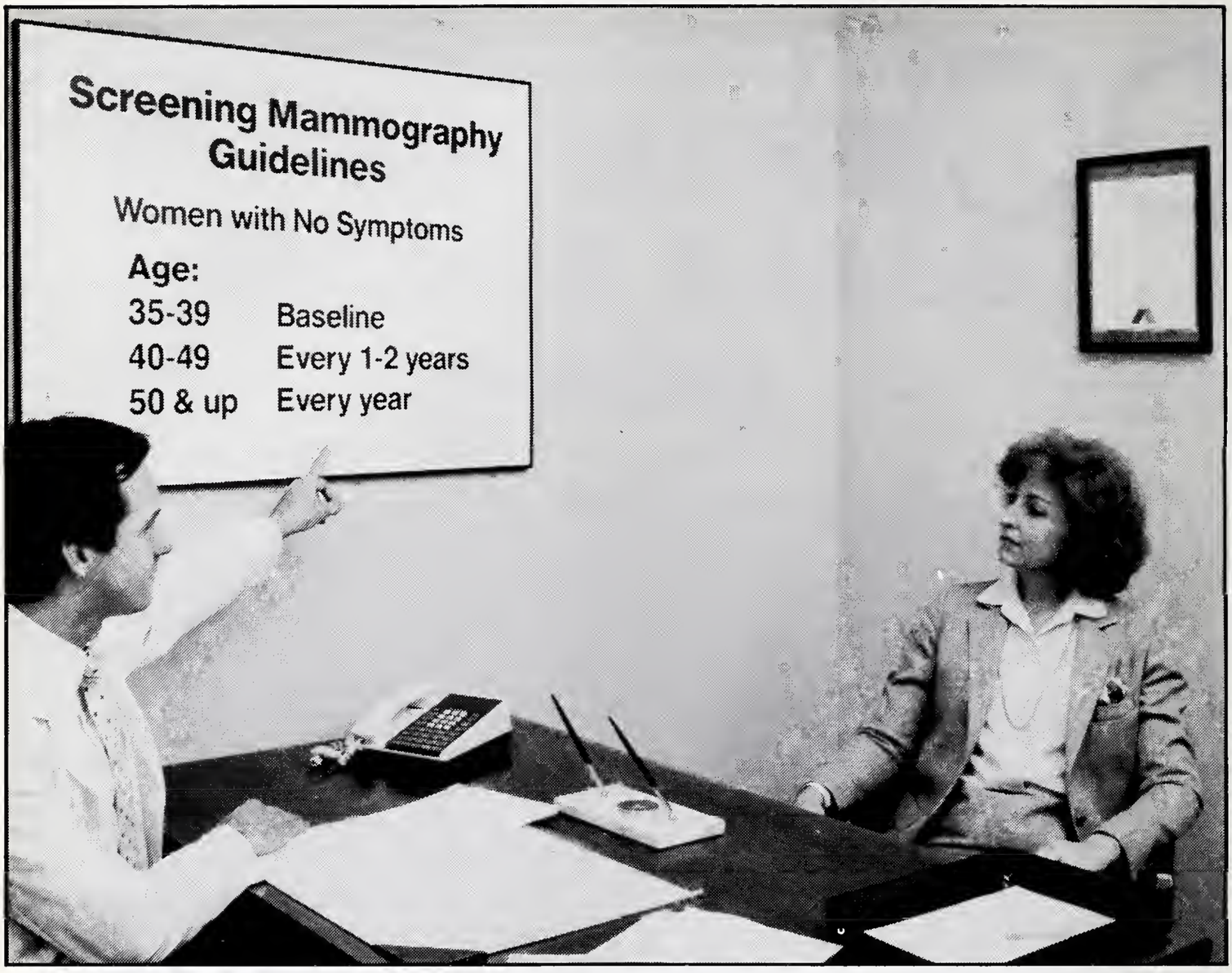
PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator



What will you tell her about screening mammography?

Many of your patients will hear about screening mammography through a program launched by the American Cancer Society and the American College of Radiology, and they may come to you with questions. What will you tell them?

We hope you'll encourage them to have a screening mammogram, because that, along with your regular breast examinations and their monthly self examinations, offers the best chance of early detection of breast cancer, a disease which will strike one woman in 10.

If you have questions about breast cancer detection for asymptomatic women, please contact us.

AMERICAN CANCER SOCIETY®

Professional Education Dept.
National Headquarters
90 Park Avenue
New York, New York 10016
or your local society

acr American College of Radiology

1891 Preston White Drive
Reston, Virginia 22091
(703) 648-8900

State flag of Texas

Flag It.

To complete your prescription,
be sure to sign on the right,
on the "Dispense As Written" line.
This "flags" both pharmacist and patient
that you want the *brand* to be dispensed.
And it protects your decision.

VALIUM®
brand of
diazepam/Roche®

scored tablets

2 mg 5 mg 10 mg

The one you know best.

The cut out "V" design is a registered trademark of Roche Products Inc.

Copyright © 1987 by Roche Products Inc. Manati, Puerto Rico 00701. All rights reserved.

ROCHE®

MARK S. KREMERS, MD

KEVIN R. WHEELAN, MD

Management of refractory SVT with an antitachycardia pacemaker

Mark S. Kremers, MD, and Kevin R. Wheelan, MD, Department of Internal Medicine, Cardiology Division, The University of Texas Health Science Center at Dallas. Send reprint requests to Dr Kremers, Cardiology Division H8.116, Department of Internal Medicine, 5323 Harry Hines Blvd, Dallas, TX 75235–9034.

A patient with Wolff-Parkinson-White syndrome and supraventricular tachycardia was successfully treated with the implantation of an antitachycardia pacemaker after unsuccessful drug therapy, attempted surgical interruption of the bypass tract, and transcatheter atrioventricular nodal ablation. The pacemaker, a Medtronic Symbios Model 7008, automatically recognizes tachycardia and then responds with either underdrive asynchronous atrioventricular sequential pacing or a programmed atrial burst. Tachycardia detection is recorded in the pacemaker's memory for subsequent physician recognition. Antitachycardia pacing may be useful in selected cases of supraventricular tachycardia but requires invasive electrophysiologic testing to assure safety and efficacy.

Supraventricular tachycardia (SVT) is a common medical problem that is usually successfully managed with a variety of drugs (1). Alternative forms of therapy for medically refractory cases include surgery (2), transcatheter ablative techniques (3), and pacemaker therapy (4,5). Recently we treated a patient with Wolff-Parkinson-White syndrome (WPW) with recurrent orthodromic atrioventricular reentry tachycardia (AVRT) that was refractory to medical therapy, attempted surgical bypass tract interruption, and transcatheter atrioventricular node ablation. Implantation of the Medtronic Symbios Model 7008 dual chamber antitachycardia pacemaker has led to significant improvement in arrhythmia management in this difficult case. To our knowledge, this report describes the first implantation of this device in Texas.

Case history

We treated a 41-year-old white man for Wolff-Parkinson-White syndrome and recurrent AVRT (cycle length = 300 msec) that persisted despite therapy with digoxin, beta blockers, calcium antagonists, type 1a antiarrhythmics, and amiodarone alone and in combination. Sustained AVRT on one occasion precipitated an acute subendocardial myocardial infarction. Catheterization revealed insignificant coronary artery disease and a left ventricular ejection fraction of 45%. Electrophysiologic testing confirmed the presence of a left free wall bypass tract participating in AVRT. Enhanced atrioventricular nodal conduction was also present. Surgical interruption of the bypass failed because of a small left atrium which limited exposure. Transcatheter atrioventricular nodal ablation was unsuccessful in producing complete heart block but slowed the rate of the tachycardia (cycle length = 430 msec). Despite therapy with amiodarone and digoxin in combination, AVRT recurred and precipitated pulmonary edema.

Repeat electrophysiologic testing on these drugs revealed inducible AVRT, which was reproducibly terminated with premature extrastimuli and rapid atrial pacing. The patient was offered participation in a study of the Medtronic Symbios Model 7008 dual chamber antitachycardia pacemaker. He underwent preimplantation testing using an external version of the device while continuing to take amiodarone and digoxin. This revealed nonreproducible termination of the AVRT with underdrive atrioventricular sequential pacing. However, with atrial burst pacing at a cycle of 300 msec for ten beats, the arrhythmia was consistently and reproducibly terminated. The device was implanted without difficulty and programmed to the atrioventricular sequential (DVI) atrial burst mode with a low rate of 40 and an upper rate of 125 beats per minute. While under continuous telemetry monitoring, two episodes of SVT were automatically converted by the device (Fig 1). Subsequent exercise testing revealed a maximum heart rate of 105 beats per minute, well under the upper rate limit.

At follow-up one month later, the patient gave a history of brief episodes of palpitations always terminating within several seconds. A check of the device's memory via telemetry confirmed the detection of a previous tachycardia event. Noninvasive induction of the patient's AVRT using the temporary mode of the pacemaker confirmed appropriate and effective antitachycardia pacing function. Holter monitoring revealed normal pacemaker function.

Discussion

SVT is occasionally refractory to medical therapy and requires more aggressive management. Surgery, transcatheter ablation, and pacing can be utilized in these difficult cases. In this case, surgery and catheter ablation were unsuccessful in preventing bouts of severe AVRT. Implantation of the Medtronic Symbios Model 7008 pacemaker has led to improvement in arrhythmia control.

The Symbios 7008 is a dual chamber, bipolar, multiprogrammable DDD pacemaker with additional automatic antitachycardia features. The antitachycardia modes are "atrial burst overdrive" or "dual demand underdrive." In the atrial burst mode, rapid pacing at a rate greater than the tachycardia is used to break the arrhythmia. The number and rate of pulses of the burst is programmable. In the dual demand underdrive mode, asynchronous atrioventricular sequential (DOO) pacing at 75 beats per minute randomly scans diastole in an attempt to find the critical time when a paced beat might enter the reentrant circuit and stop the arrhythmia.

The occurrence of five beats at a rate greater than the upper rate limit automatically starts antitachycardia pacing and sets a "flag" in the pace-

maker memory circuit. Antitachycardia pacing continues until the tachycardia is terminated in the underdrive mode, or until tachycardia is terminated or three therapies have been delivered in the overdrive mode. In this patient, the DVI atrial burst mode was chosen because of the proven efficacy of the burst mode, the presence of intact retrograde conduction up the bypass tract (making pacemaker-mediated tachycardia in the atrial sensing DDD mode a possibility), and the presence of intact antegrade atrioventricular conduction and normal sinus node function.

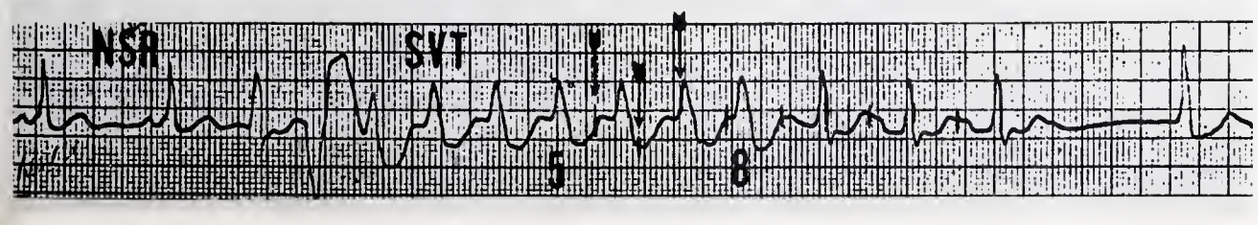
Tachycardia termination with pacing requires the paced impulses to enter the reentrant circuit and block bidirectionally. Factors affecting this include the distance of the pacing site from the circuit, the refractoriness of the intervening myocardium, and the properties of the reentrant circuit itself (5). Underdrive pacing is the simplest mode of pacemaker-mediated tachycardia termination but may be ineffective because of failure of the paced impulses to reach the reentrant circuit or create bidirectional block (6). Burst pacing is the most effective means of tachycardia termination but is fraught with the potential danger of accelerating the underlying arrhythmia (6). Because of the potential adverse effects, electrophysiologic testing must be performed prior to implantation of antitachycardia devices. In this case the presence of a bypass tract with antegrade conduction created an additional potential risk of using the atrial burst mode. However, the continuation of amiodarone produced 2:1 antegrade block in the bypass tract during atrial burst pacing and facilitated tachycardia termination. Automatic tachycardia interruption has occurred as evidenced by the patient's history and the "flag" noting tachycardia detection by the device.

In summary, we have utilized an investigational pacemaker with antitachycardia capabilities, the Medtronic Symbios Model 7008, in combination with amiodarone and digoxin to control refractory, recurrent AVRT in a patient with Wolff-Parkinson-White syndrome. Antitachycardia pacing can be beneficial in the management of selected cases of SVT, but requires expertise in invasive electrophysiology and pacing.

REFERENCES

1. Akhtar M: Supraventricular tachycardias: electrophysiologic mechanisms, diagnosis and pharmacologic therapy, in Josephson ME, Wellens JHH (eds): Tachycardias: mechanism, diagnosis, treatment. Philadelphia, Lea & Febiger, 1984, p 137.
2. Sealy WE, Anderson RW, Gallagher JJ: Surgical treatment of supraventricular tachyarrhythmias. J Thorac Cardiovasc Surg 73(4):511–522, 1977.
3. Gallagher JJ, Svenson RH, Kasell JH, et al: Catheter technique for closed-chest ablation of the atrioventricular conduction system. N Engl J Med 306(4):194–200, 1982.
4. Lister JW, Cohen LS, Bernstein WH, et al: Treatment of supraventricular tachycardias by rapid atrial stimulation. Circulation 38(6):1044–1059, 1968.
5. Curry PV, Rowland E, Krikler DM: Dual-demand pacing for refractory atrioventricular reentry tachycardia. Pace 2(2):137–151, 1979.
6. Fisher JD, Matos JA, Kim SG: Antitachycardia pacing and stimulation: with particular reference to ventricular arrythmias, in Josephson ME, Wellens JHH (eds): Tachycardias: mechanism, diagnosis, treatment. Philadelphia, Lea & Febiger, 1984, p 413.

1. Normal sinus rhythm (NSR) with preexcitation is present at the left. A ventricular couplet induces supraventricular tachycardia with left bundle branch block. After the fifth beat at a rate faster than the upper rate limit (includes the second premature ventricular contraction [PVC]) the pacemaker delivers a ten-beat atrial burst at a cycle length of 300 msec (arrows depict first three). In response, the arrhythmia speeds up for one beat (#8) and then breaks. The remaining atrial impulses are conducted in a 2:1 pattern through the normal conduction system.



TERRY C. McMAHON, MD

Emotional distress and psychosocial adaptation in cancer patients

Terry C. McMahon, MD, Assistant Professor, Department of Psychiatry, School of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

Interest in the psychosocial and psychiatric aspects of oncology has grown in the 1980s. This article reviews selected literature relating to the nature of the psychosocial and emotional distress experienced by cancer patients; variables that affect psychosocial distress and adaptation, including diagnosable psychiatric disorders; the psychosocial impact of longer-term survival; and strategies for psychosocial and psychotherapeutic intervention. A goal of this article is to enhance the clinician's understanding of the nature and significance of psychosocial distress in cancer patients and the interventions that may be useful in addressing these problems.

During the 1980s there has been increased interest in the psychiatric and psychosocial aspects of oncology and cancer care. This can be related to several factors, including improved five-year survival rates for cancer patients, and an increasing number of longer-term cancer survivors (1). Hence, in this area of research and clinical care the emphasis has shifted from a narrow focus on terminal illness to a somewhat broader focus which involves seeing the cancer patient as the paradigm of the individual with chronic medical illness. The purpose of this article is to review selected aspects of the literature which focus upon the emotional distress experienced by cancer patients and to discuss some of the important issues related to their psychosocial adjustment and psychosocial care.

Psychosocial distress and concerns in the cancer patient

One of the most common immediate responses by patients and families to the diagnosis of and treatment for cancer is fear. As noted by Holland (2), this can involve fear of death, of the uncertainty of one's future and clinical course, of progressive pain, and of loss of a body part or function. Other important concerns often relate to perceived threats to occupational, sexual, and family functioning, as well as a fear of financial burdens that may overwhelm individual or family resources. Much of this type of response has been related to the view of cancer as an essentially untreatable illness. However, as survival rates and remission duration have increased, there have been more opportunities to discover how these concerns and levels of distress evolve over time.

Wellisch et al (3) studied the psychosocial problems of homebound cancer patients with advanced disease. In this retrospective study of 570 very ill cancer patients, 30% reported concerns about pain and somatic side effects of illness and treatment. The most frequent concerns following this were mood disturbance (15%), problems with medical equipment used in the home (8%), problems with the impairment of family relationships (7%), and concerns about cognitive impairment (6%). This literature suggests that patients and their families can have a variety of different concerns that run the gamut from the emotional and existential to the physical, sexual, and material impact of the disease and its treatment. Hence, when addressing these issues with patients, it is important to avoid assumptions that stereotype cancer patients and their concerns and to remain mindful of how emotional distress and areas of concern may change with the stage of the illness.

Factors affecting psychosocial distress and adaptation

Related to these issues is the concept of how individuals cope with cancer and its treatment, particularly on a longer-term, more chronic basis. A variety of factors can have an impact in this regard. With respect to the demographic variables, Novotny et al (4) noted that being physically sicker and more socially isolated can adversely affect coping; that younger patients may react more acutely and dramatically but can also offset this with greater occupational and social activity; and older patients, though more preoccupied with bodily changes and physical restrictions, may offset these effects with a calmer, more philosophical approach.

From a psychological perspective, Peck (5) has also commented on the significance of psychological defense mechanisms that cancer patients may employ. While denial is used by some patients, he notes that total denial is uncommon and that many patients use a variety and series of defenses. These might include displacement, intellectualization, isolation of affect, and identification with the physician, all of which can help patients minimize emotional distress and foster a sense of control and mastery. Worden and Sobel (6) noted that a positive adaptation to cancer appeared related to higher ego strength as measured by The Barron Ego-Strength Scale (an MMPI subscale). They related this to the importance of enhancing cognitive skills in coping with cancer.

Regarding advanced disease Davies et al (7) noted that, in advanced disease, patients with mild organic impairment may actually show better psychological adaptation. Holland (8) noted how progressive disease and the distress associated with it can prompt patients and families to seek unproven remedies. She noted the importance of understanding the emotional basis for this and advised health care providers to avoid judgmental or punitive responses. Finally, as noted by Bloom (9), it may also be important to analyze the extent to which a pa-

tient whose illness follows a more chronic course experiences good support from family, friends, and peers, as well as health care providers. For instance, if the patient's family and health care providers appear to view emotional distress and financial concerns as inappropriate or uncomfortable topics for discussion, the patient's resulting effort to suppress these may lead to an inappropriate use of denial and minimization.

Factors affecting psychosocial distress and adaptation

Related to these issues is the concept of how individuals cope with cancer and its treatment, particularly on a longer-term, more chronic basis. A variety of factors can have an impact in this regard. With respect to the demographic variables, Novotny et al (4) noted that being physically sicker and more socially isolated can adversely affect coping; that younger patients may react more acutely and dramatically but can also offset this with greater occupational and social activity; and older patients, though more preoccupied with bodily changes and physical restrictions, may offset these effects with a calmer, more philosophical approach.

From a psychological perspective, Peck (5) has also commented on the significance of psychological defense mechanisms that cancer patients may employ. While denial is used by some patients, he notes that total denial is uncommon and that many patients use a variety and series of defenses. These might include displacement, intellectualization, isolation of affect, and identification with the physician, all of which can help patients minimize emotional distress and foster a sense of control and mastery. Worden and Sobel (6) noted that a positive adaptation to cancer appeared related to higher ego strength as measured by The Barron Ego-Strength Scale (an MMPI subscale). They related this to the importance of enhancing cognitive skills in coping with cancer.

Regarding advanced disease, Davies et al (7) noted that, in advanced disease, patients with mild organic impairment may actually show better psychological adaptation. Holland (8) noted how progressive disease and the distress associated with it can prompt patients and families to seek unproven remedies. She noted the importance of understanding the emotional basis for this and advised health care providers to avoid judgmental or punitive responses. Finally, as noted by Bloom (9), it may also be important to analyze the extent to which a patient whose illness follows a more chronic course experiences good support from family, friends, and peers, as well as health care providers. For instance, if the patient's family and health care providers appear to view emotional distress and financial concerns as inappropriate or uncomfortable topics for discussion, the patient's resulting effort to suppress these may lead to an inappropriate use of denial and minimization.

With respect to these reports, several points warrant emphasis. As noted by Silberfarb et al (15), delirium and dementia are often underdiagnosed. This population may be particularly predisposed due to the underlying illness, the impact of radiation and chemotherapy, and the infectious, endocrine, and metabolic complications that may ensue (16,17). Since, by definition, these syndromes are due to organic factors, changes in cognitive and intellectual functioning can often signal a change in condition that may warrant prompt intervention in order to limit further deterioration. Hence, clinicians must be alert to recognize and address these conditions.

Diagnosing major depression in cancer patients can be particularly difficult since the differentiation between major depression and an organic affective syndrome due to the somatic effects of the illness and treatment can be a difficult distinction (18). A recent article by Bukberg et al (19) stated that an increased severity of depression seemed to be associated with an increased physical disability (Karnosky less than 40) and that the cognitive features of depression (feelings of helplessness, hopelessness, worthlessness, and failure), diminished mood reactivity, sleep disturbance, and suicidal ideation were more helpful than somatic symptoms and impaired energy in differentiating the depressed from nondepressed group. These data are consistent with the reports by Cavanaugh (20) regarding the diagnosis of depression in patients with other chronic medical conditions. Hence, this literature emphasizes the importance of focusing on sleep changes, cognitive changes, and lack of mood reactivity instead of physical symptoms per se when considering a diagnosis of major depression.

Psychosocial adaptation and long-term survival

As survival rates and the number of tumors susceptible to remission have increased, there has been an increasing focus on the well-being of the longer-term survivor of cancer. The existing literature is somewhat sparse, and a variety of findings have been reported. Several retrospective, noncontrolled reports (21–23) have suggested that the majority of longer-term survivors demonstrate good psychosocial adjustment, a positive attitude toward life, and no overt increased incidence in prominent psychiatric symptomatology. However, these reports also noted a tendency in a minority toward early retirement and disability (22) and chronic depression (23). Schmale et al (24) reported on another group of 104 cancer survivors more than three years past their last cancer treatment. These patients were drawn from populations at three differ-

ent centers and were studied using the General Well-Being Measure from the Rand Health Insurance Study (25). They compared the results in this sample to physically healthy controls matched for age, sex, and education. They noted in the cancer group a decreased sense of self-control and more general health worries than the control sample but reported that the groups did not differ on other measures of general medical and mental well-being. They also did not differ on scales measuring anxiety, depression, and positive well-being.

Though these studies seem to suggest, in general, a good adjustment for cancer survivors and a relative lack of significant psychopathology following cancer treatment, many of these reports may be criticized for being nonprospective and noncontrolled. In addition, many of these studies have used scales that may not be optimally sensitive to clinically significant anxiety and/or depression. Hence, additional data would be helpful in this area. Studies that are prospective and controlled and that utilize clinical scales may be particularly useful in further refining our understanding of the psychosocial sequelae of longer-term survival.

Psychosocial and psychotherapeutic interventions

A number of different techniques and approaches have been described. These include supportive psychotherapy on an individual basis, group therapy, and visualization with imagery (26). While positive results have been recorded using an approach such as group therapy in a randomized, prospective design (27), as noted by Greer and Silberfarb (26), many of these studies are primarily descriptive, largely uncontrolled, and are based on selective patient samples.

Regarding the use of psychotherapeutic interventions in cancer patients, Worden (28) has described the importance of the identification of the patient at risk for high levels of emotional distress and the usefulness of a time-limited, problem-solving approach that is more individualized and personalized for specific patients. Another recent study compared the effects of psychotherapy on the emotional and physical distress during radiotherapy. Forester et al (29) studied 100 patients, 48 of whom were randomly assigned to weekly supportive psychotherapy for ten weeks. In the group that received psychotherapy, the authors noted an initial reluctance by patients to discuss matters of concern. However, they also note that after this initial resistance, these patients did engage in subsequent supportive sessions that ultimately contained a variety of supportive, educational, interpretive, and cathartic elements. The authors reported a statistically significant decrease in the emotional psychological distress in the psychotherapy group compared to the control group of 52 patients who received no psychotherapy. In this study the authors in particular noted the importance of a more interactive, directive approach that encouraged patients to focus on their distress in a "here and now" manner.

Conclusion

As cancer survival rates have increased, cancer has emerged as a paradigm of chronic disease. Hence, as more patients survive for longer periods of time, the greater the opportunity becomes to delineate and characterize not only the emotional distress and psychosocial concerns of the acute phase, but also those of the more chronic phases of the illness.

This brief discussion is neither exhaustive nor definitive regarding emotional distress and psychosocial adaptation in cancer patients. Nevertheless, important clinical and therapeutic points are suggested by these articles. First, while many patients are relatively free of emotional distress and require little psychosocial or psychiatric intervention, a notable minority may develop significant levels of distress that warrant specific interventions. Second, in this latter group, the distress experienced can be a function of multiple factors. Hence, any assessment that unduly focuses on psychological and social factors to the exclusion to disease-related organic factors and diagnosable psychiatric disorders will likely be deficient. Third, in the absence of specific organic or psychiatric disorders, which will likely require specific biological or pharmacological interventions, emotional and psychosocial distress may be alleviated by specific psychotherapeutic approaches that are pragmatic, problem-oriented, and time-limited and that include the concentrated participation of therapists and patients. Fourth, given the broad range of factors that can affect psychosocial distress in adaptation, any tendency to stereotype cancer patients or their concerns must be avoided. As the knowledge in this area of cancer care continues to expand, we likewise improve our ability to address and relieve more effectively and efficiently the emotional and psychosocial problems that some patients experience in the course of cancer.

REFERENCES

1. Massie M, Holland J: Psychiatry and oncology, in Psychiatry Update, vol 3. Washington, DC, American Psychiatric Association Press, Inc, 1984, pp 239–256.

2. Holland J: Coping with cancer: a challenge to the behavioral sciences, in Cullen JW, Fox BH, Isom RN (eds): Cancer: The Behavioral Dimensions. New York, Raven Press, 1976, pp 263–268.

3. Wellisch D, Landsverk J, Guidera K, et al: Evaluation of psychosocial problems of the homebound cancer patient: I. Methodology and problem frequencies. Psychosom Med 45(1):11–21, 1983.

4. Novotny ES, Hyland JM, Coyne L, et al: Factors

affecting adjustment to cancer. Bull Menninger Clin 48(4):318–328, 1984.

5. Peck A: Emotional reactions to having cancer. Am J Roentgenol Radium Ther Nucl Med 114(3):591–599, 1972.

6. Worden JW, Sobel HJ: Ego strength and psychosocial adaptation to cancer. Psychosom Med 40(8): 585–592, 1978.

7. Davies RK, Quinlan DM, McKegney FP, et al: Organic factors and psychological adjustment in advanced cancer patients. Psychosom Med 35(6):464–471, 1973.

8. Holland JC: Why patients seek unproven cancer remedies: a psychological perspective. CA 32(1):10–14, 1982.

9. Bloom JR: Social support, accommodation to stress and adjustment to breast cancer. Soc Sci Med 16(14): 1329–1338, 1982.

10. Craig TJ, Abeloff MD: Psychiatric symptomatology among hospitalized cancer patients. Am J Psychiatry 131(12):1323–1327, 1974.

11. Farber J, Weinerman B, Kuypers J: Psychosocial distress in oncology outpatients. J Psychosocial Oncology, 2:109–118, 1984.

12. Levine PM, Silberfarb PM, Lipowski ZJ: Mental disorders in cancer patients: a study of 100 psychiatric referrals. Cancer 42(3):1385–1391, 1978.

13. Derogatis LR, Morrow GR, Fetting J, et al: The prevalence of psychiatric disorders among cancer patients. JAMA 249(6):751–757, 1983.

14. Massie MJ, Gorzynski G, Mastrovito R, et al: The diagnosis of depression in hospitalized patients with cancer, meeting abstract. Proc Am Assoc Cancer Res 20:432, 1979.

15. Silberfarb PM, Philibert D, Levine PM: Psychosocial aspects of neoplastic disease: II. Affective and cognitive effects of chemotherapy in cancer patients. Am J Psychiatry 137(5):597–601, 1980.

16. Peterson LG, Popkin MK: Neuropsychiatric effects of chemotherapeutic agents for cancer. Psychosomatics 21(2):141–153, 1980.

17. Stolinsky DC: Paraneoplastic syndromes. West J Med 132(3):189–208, 1980.

18. Fernandez F, Adams F, Levy J, et al: Depression and cancer: an update. Tex Med 82(7):46–49, 1986.

19. Burkberg J, Penman D, Holland JC: Depression in hospitalized cancer patients. Psychosom Med 46(3): 199–212, 1984.

20. Cavanaugh S, Clark DC, Gibbons RD: Diagnosing depression in the hospitalized medically ill. Psychomatics 24(9):809–815, 1983.

21. Kennedy BJ, Tellegen A, Kennedy S, et al: Psychological response of patients cured of advanced cancer. Cancer 38(5):2184–2191, 1976.

22. Danoff S, Kramer P, Irwin P, et al: Assessment of the quality of life in long-term survivors after definitive radiotherapy. Am J Clin Oncol 6:339–345, 1983.

23. Shanfield SB: On surviving cancer: psychological considerations. Compr Psychiatry 21(2):128–134, 1980.

24. Schmale AH, Morrow GR, Schmitt MH, et al: Well-being of cancer survivors. Psychosom 45(2):163–169, 1983.

25. Brook RH, Ware JE Jr, Davies-Avery A, et al: Overview of adult health status measures fielded in Rand's Health Insurance Study. Med Care 17:1–130, 1979.

26. Greer S, Silberfarb PM: Psychological concomitants of cancer: current state of research. Psychol Med 12(3): 563–573, 1982.

27. Spiegel D, Bloom JR, Yalom I: Group support for patients with metastatic cancer. A randomized outcome study. Arch Gen Psychiatry 38(5):527–533, 1981.

28. Worden JW: Teaching adaptive coping/Self-Help, meeting abstract. Psychological, Social, and Ethical Issues on Human Values and Cancer: April 23–25, 1981, Washington, DC, American Cancer Society, 1981, pp 129–137.

29. Forester B, Kornfeld DS, Fleiss JL: Psychotherapy during radiotherapy: effects on emotional and physical distress. Am J Psychiatry 142(1):22–27, 1985.

Coming in September:

ONCOLOGY GUIDELINES REPORT

". . . a physician's perspective of a rapidly-changing field . . . pragmatic set of guidelines for busy physicians who need to make decisions regarding primary care, consultation, or referral . . . most current experience on optimal care for the cancers most frequently encountered . . ."

Developed by 87 cancer specialists from all regions of the state, working as part of the Legislative Task Force on Cancer in Texas.

Yours with *Texas Medicine*'s double issue in September.

Watch for it!

Crisis in black and white.

Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

Motrin® 800 TABLETS mg

ibuprofen

Extra strength
Convenience
Economy

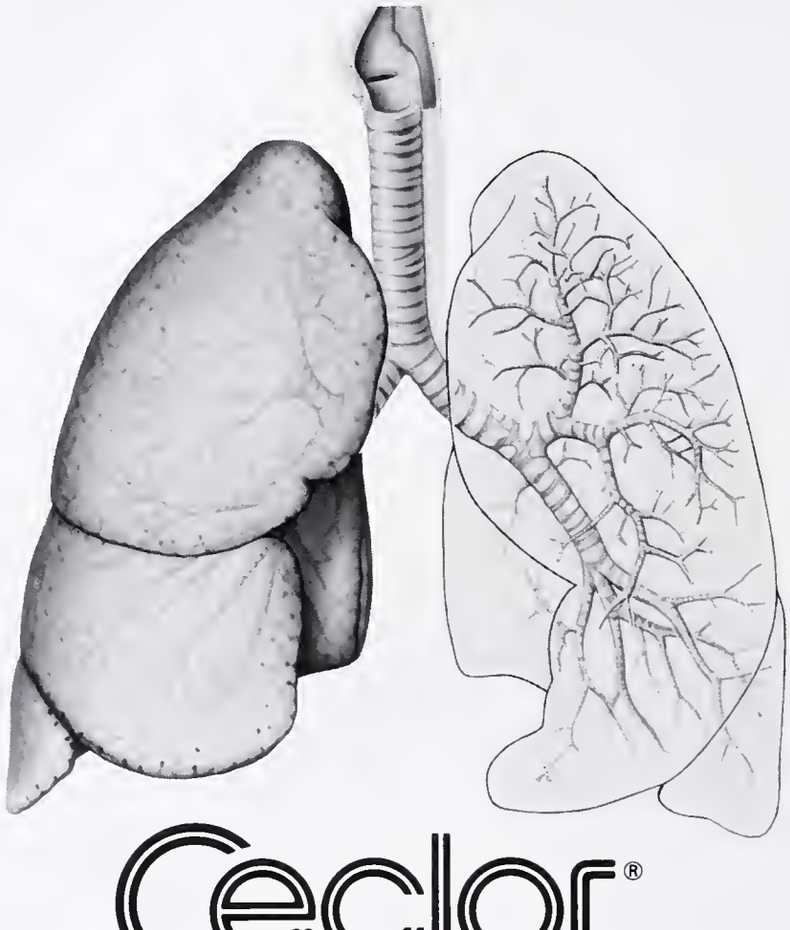
Upjohn

A Century of Caring
1886·1986

©1986 The Upjohn Company

J-6138 January 1986

Consider the causative organisms...



Ceclor®
cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULO 8E AOMINISTEREO CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS PENICILLINS ANO CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSI-8LE RE ACTIONS INCLUOE ANAPHYLAXIS

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

[072886R]

PA 8794 AMP

©1987, ELI LILLY AND COMPANY

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

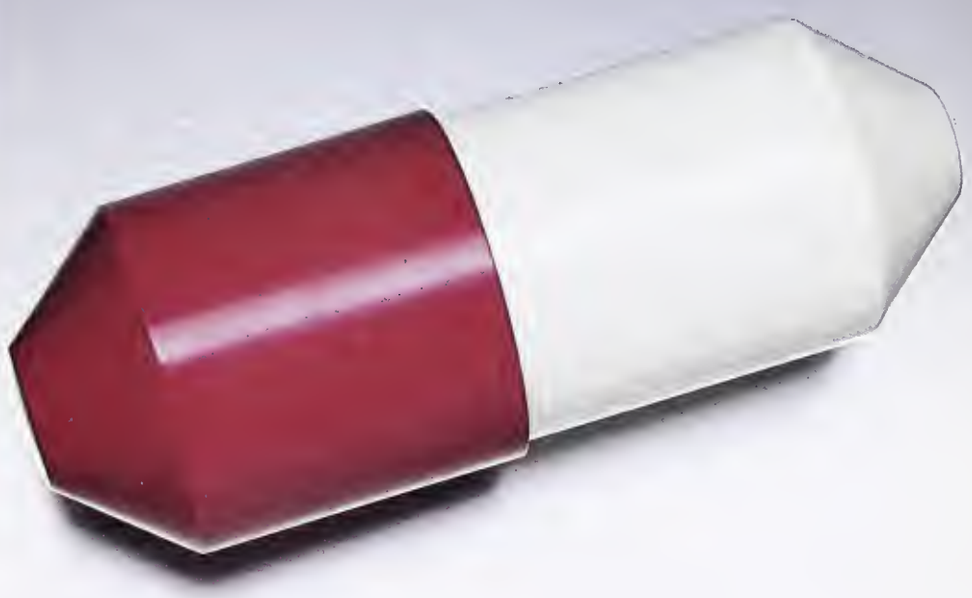
Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

700241

In Hypertension*... When You Need to Conserve K+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).



Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

RS-DZ:L42

Potassium-Sparing

DYAZIDE®

25 mg Hydrochlorothiazide/**50 mg** Triamterene/SKF

Over 20 Years of Confidence

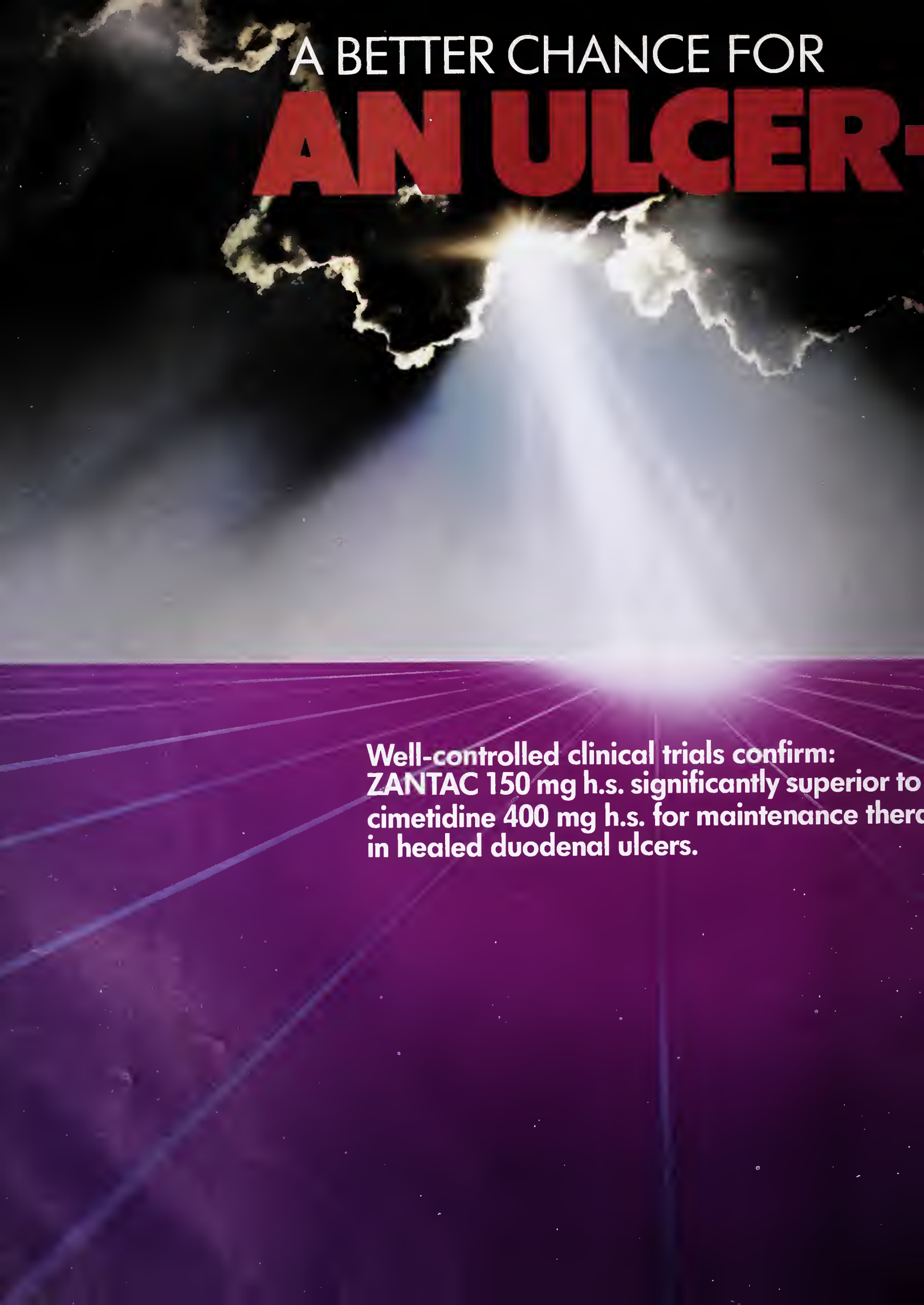
The unique red and white Dyazide® capsule: Your assurance of SK&F quality.

a product of

SK&F CO.

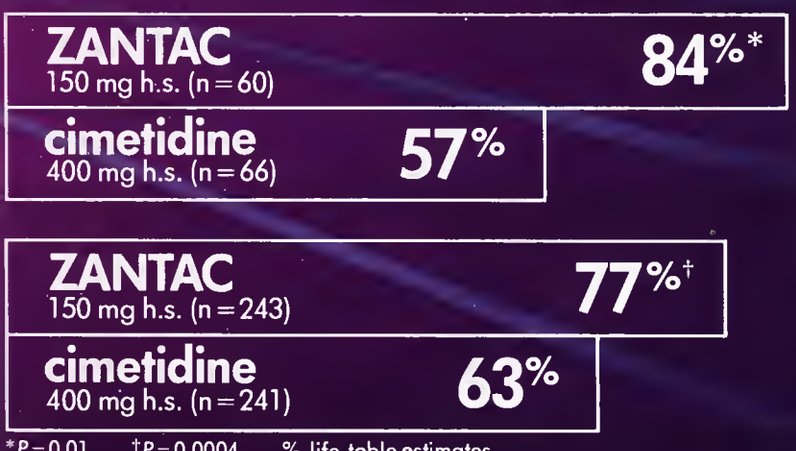
Carolina, P.R. 00630

©SK&F Co., 1983


A BETTER CHANCE FOR
AN ULCER-
Well-controlled clinical trials confirm:
ZANTAC 150 mg h.s. significantly superior to
cimetidine 400 mg h.s. for maintenance thera
in healed duodenal ulcers.

FREE FUTURE

Percent of patients ulcer-free after 1 year of therapy



*P = 0.01 †P = 0.0004 % life-toble estimates

All potients were permitted prn ontocids for relief of poin.
Adopted from Silvis[1] ond Gough[2]

These two triols[1,2] used the currently recommended dosing regimen of cimetidine (400 mg h.s.) ond ronitidine (150 mg h.s.). A comporison of other dosing regimens hos not been studied.
The studied dosing regimens ore not equivolent with respect to the degree and durotion of ocid suppression or suppression of nocturnol ocid.
The superiority of ronitidine over cimetidine in these triols indicotes thot the dosing regimen currently recommended for cimetidine is less likely to be os successful in maintenonce therapy.

Zantac® 150 h.s.
ranitidine HCl/Glaxo 150 mg tablets

Glaxo / ROCHE®

See next poge for references ond Brief Summory of Product Informotion.

ZAN375 July 1987

References: 1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastraenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bardhan KD, et al: Ranitidine and cimetidine in preventian of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.

ZANTAC® 150 Tablets
(ranitidine hydrochlarlde)
ZANTAC® 300 Tablets
(ranitidine hydrochlarlde)

BRIEF SUMMARY OF PRODUCT INFORMATION

The fallawing is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC® product labeling.

INDICATIONS AND USAGE: ZANTAC® is indicated in:
1. Short-term treatment of **active duadenal ulcer.** Mast patients heal within four weeks.
2. **Maintenance therapy** for duadenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathalagical hypersecretory canditians** (eg, Zollinger-Ellisan syndrome and systemic mastocytasis).
4. Short-term treatment of **active, benign gastric ulcer.** Mast patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastraesaphageal reflux disease (GERD).** Symptomatic relief commonly accurs within one or two weeks after starting therapy and is maintained throughaut a six-week course of therapy.

In active duadenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity ta the drug.

PRECAUTIONS: Symptomatic respanse to ZANTAC® therapy does not preclude the presence af gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal functian (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix® may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended dases of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absarption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC far use in children or pregnant patients. Since ZANTAC is secreted in human milk, cautian should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC® administration. Canstipation, diarrhea, nausea/vomiting, and abdominal discamfort/pain have been reparted. There have been rare reports af malaise, dizziness, somnolence, insomnia, vertiga, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administratian there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanaliculor or mixed, with or without jaundice.

There have been rare reports af reversible leukopenia, granulocytapenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, accasional cases af gynecamastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rorely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: Active Duadenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg ance daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient papulation have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathalagical Hypersecretary Canditians (such as Zallinger-Ellisan Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In same patients it may be necessary ta administer ZANTAC 150-mg doses more frequently. Doses should be adjusted ta individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult aral dosoge is 150 mg twice o day.

GERD: The current recommended adult oral dosage is 150 mg twice o doy.

Dosage Adjustment for Patients with Impaired Renol Function: On the bosis of experience with o group of subjects with severely impaired renal function treoted with ZANTAC, the recommended dosoge in potients with o creotinine cleorance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing moy be increosed to every 12 hours or even further with coution. Hemodialysis reduces the level of circuloting ranitidine. Ideolly, the dosoge schedule should be odjusted so thot the timing of o scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC® 300 Toblets (ronitidine hydrochloride equivolent to 300 mg of ronitidine) ore yellow, copsule-shoped tablets embossed with "ZANTAC 300" on one side ond "Gloxo" on the other. They ore ovoiloble in bottles of 30 (NDC 0173-0393-40) ond unit dose pocks of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ronitidine hydrochloride equivalent to 150 mg of ronitidine) are white toblets embossed with "ZANTAC 150" on one side ond "Gloxo" on the other. They ore avoiloble in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 toblets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) In a dry place. Protect fram light. Replace cap securely after each apening.

© Copyright 1983, Gloxo Inc. All rights reserved. October 1986

Glaxo
Gloxo Inc.
Research Triongle Pork, NC 27709

What you get back is immeasurable.

Just five hours a week. Just 5% of your income. It's not much to give, to the causes you really care about. But that small investment could change somebody's life. And it's hard to imagine a better return than that.

INDEPENDENT SECTOR
Ad Council

JACK N. ALPERT, MD
YOLANDA PENA, MD
D. ROBERT LEACHMAN, MD

Anterior ischemic optic neuropathy after coronary bypass surgery

Anterior ischemic optic neuropathy (AION) was observed in three patients within five days after coronary bypass surgery (CAB). Previous reports have emphasized a normal erythrocyte sedimentation rate (ESR) as a prerequisite for a diagnosis of non-arteritic AION in this setting. Our patients had ESRs ranging from 70 mm/hr to 131 mm/hr when first checked and a clinical course consistent with non-arteritic AION. In a survey of the ESR within five days of uncomplicated CAB, seven of ten patients had values over 40 mm/hr. Thus the ESR cannot distinguish between arteritic and non-arteritic AION after CAB. The etiology remains unclear.

Anterior ischemic optic neuropathy (AION) has a distinct clinical presentation (1). There is a sudden onset of visual loss, usually an inferior altitudinal or inferonasal quadrantic defect accompanied by funduscopic features of a pale, swollen disk with hemorrhages. Systemic symptoms of headache, jaw claudication, myalgia, and weight loss associated with an elevated erythrocyte sedimentation rate (ESR) distinguish the arteritic from the non-arteritic form and require immediate treatment with corticosteroids.

When AION occurs immediately after coronary bypass surgery (CAB) multiple etiologic factors are often present. These include a history of hypotension, anemia, and coexistent carotid artery disease. The ESR has still been proposed as a main criterion to distinguish between the arteritic and non-arteritic forms (2). The three patients reported in the following case reports presented with AION, multiple etiologic variables, an elevated ESR, and a clinical course consistent with nonarteritic AION.

Case reports

PATIENT 1

A 54-year-old man was admitted to St Luke's Episcopal Hospital because of progressively severe angina pectoris refractory to medical treatment. There was no history of hypertension or diabetes mellitus. Coronary catheterization revealed severe four-vessel disease. Bilateral high-grade carotid stenoses were also noted. There was no significant intracranial vascular disease. The patient underwent a left carotid endarterectomy followed by coronary bypass surgery five days later. Two days after surgery, he complained of blurred vision in the right eye and recognized a nasal field deficit. Ophthalmologic and neurologic consultations were obtained the following day. Findings included a visual acuity of 20/30 in the right eye (OD) and 20/25 in the left eye (OS). There was superior temporal pallor and cloudy swelling of the right optic disk. Visual field testing by confrontation showed a dense nasal hemianopic field defect in the right eye. A Marcus-Gunn pupil was present on the right side. The remainder of the neurologic examination was normal. Three days after surgery an ESR was 131 mm/hr. Hemoglobin was 9.8 g/dL (98 g/L) and hematocrit 28.7%. Serum protein electrophoresis was unremarkable. An electroencephalogram was normal. The patient was immediately given 80 mg of prednisone followed by 60 mg on the next morning and daily thereafter. Subsequent sedimentation rates were 134 mm/hr and 126 mm/hr on the fourth and sixth postoperative days. A flame-shaped hemorrhage and increased disk swelling were then noted. Hemoglobin was 10.6 g/dL (106 g/L) and hematocrit 32.3%. On the 11th postoperative day the ESR had dropped to 56 mm/hr, but vision and fundus appearances were unchanged.

COMMENT—The patient had a high-grade right carotid stenosis that could have contributed to diminished perfusion of the ophthalmic artery during cardiopulmonary bypass. A significant drop in hematocrit, from 48% on admission to 28%, occurred in the immediate postoperative period and could be an etiologic factor. Treatment with prednisone had no immediate beneficial effect on vision, funduscopic appearance, or the ESR.

PATIENT 2

A 54-year-old man was admitted to St Luke's Episcopal Hospital because of angina pectoris refractory to medical treatment. Coronary catheterization revealed severe triple vessel disease. The patient then underwent coronary bypass surgery. On the fourth postoperative day, he complained of poor vision in the left eye and had a mild generalized headache. Neurologic examination disclosed a flame-shaped hemorrhage at the margin of the left optic disk at 12 o'clock. An inferior altitudinal field defect by confrontation testing, visual acuity of 20/40, and Marcus-Gunn pupil were noted in the left eye. Laboratory data on the fifth postoperative day included a hemoglobin level of 9.5 g/dL (95 g/L), hematocrit of 27.4%, and ESR of 70 mm/hr. The patient was given two units of packed red blood cells. Additional examinations performed were Doppler studies of the carotid arteries, computerized axial tomography (CAT) of the brain and orbit, and an electroencephalogram, all of which were normal. On the seventh postoperative day the ESR was 68 mm/hr. Two days later the hemorrhage and field defect began to resolve, but the acuity remained unchanged.

COMMENT—The patient did not recognize visual symptoms until four days after surgery when the hematocrit had dropped to its lowest level. Thus, it is possible that the anemia in the early postoperative period played a role in the ischemic process affecting the left optic nerve. Despite the

Jack N. Alpert, MD; Yolanda Pena, MD; D. Robert Leachman, MD, Department of Neurology and Cardiology, St Luke's Episcopal Hospital, Houston, TX. Send reprints to Dr Alpert, 7515 S Main, Suite 290, Houston, TX 77030.

elevated sedimentation rates, prednisone was not administered and clinical improvement was noted on the ninth postoperative day.

PATIENT 3

A 63-year-old man was admitted to St Luke's Episcopal Hospital because of a myocardial infarction that occurred one month prior to admission and severe coronary artery disease. Diabetes mellitus was discovered at the time of his myocardial infarction. He underwent an uncomplicated aortocoronary bypass (ACB). He first complained of blurred vision in the right visual field five days after surgery but said that he was vaguely aware of some impairment of vision the day after surgery. Neurologic examination the next day disclosed slow responses to questions and poor short-term memory. There was blurring of the superior disk margins bilaterally, right greater than left, associated with disk pallor. Visual acuity was 20/25 in each eye. Bilateral inferior altitudinal visual field defects were noted by confrontation testing. Neuro-ophthalmologic consultation was obtained, but poor visual fixation and reliability of responses prevented adequate assessment by Goldmann perimetry. The right pupil reacted to light 2+/4. A right Marcus-Gunn pupil was present. Other neurologic findings were absent ankle jerks and impaired vibration perception at the toes.

Laboratory data included two normal CAT scans of the brain five days and two weeks after surgery. The ESR dropped from 125 mm/hr to 83 mm/hr between the fifth to 18th postoperative days. Hematocrit was 24.7% and 31.6% on the fourth and sixth days after surgery. Fasting blood sugar levels ranged from 139 to 214 mg/dL (7.7 to 11.9 mmol/L), and blood urea nitrogen 20 to 32 mg/dL (7.1 to 11.4 mmol/L) after surgery. Electrolytes and arterial blood gas levels were normal. Visual evoked potentials showed inconsistent responses to monocular and binocular pattern reversal. This was due to poor attention by the patient. An electroencephalogram revealed bifrontal 6 to 7 cps activity.

Subsequent neurologic examinations disclosed persistent blurring of the superior margins of both optic disks and a Marcus-Gunn pupil OD. There was gradual and complete resolution of the visual field deficit OS, but a persistent inferior altitudinal field loss OD on confrontation testing. Mental status returned to normal in about ten days.

COMMENT—This patient became acutely aware of blurred vision five days after CAB surgery. Bilateral inferior altitudinal visual field deficits were present by confrontation as well as blurred superior optic disk margins and a Marcus-Gunn pupil OD. Moderate confusion probably secondary to a microembolic encephalopathy, a fairly common complication after this surgery, interfered with a detailed neuro-ophthalmologic assessment (3). Mental status and vision OS returned to normal within two weeks and without treatment. The ESR decreased from 125 mm/hr to 83 mm/hr during this period. The hematocrit rose from 24.7% to 31.6% without transfusion, the lower value being attributed to fluid overload right after surgery. Etiologic factors for bilateral AION in this patient might include anemia, but microembolism of platelet-fibrin particles appears more likely in view of a prolonged encephalopathy after surgery.

Discussion

There are arteritic and non-arteritic forms of AION. The arteritic form, primarily temporal arteritis, usually occurs in patients over the age of 50 and presents with a characteristic clinical picture. Symptoms and signs frequently include headache, acute unilateral impairment of vision with optic disk edema, pallor, hemorrhage, and an elevated sedimentation rate (ESR) of over 40 mm/hr. Claudication of jaw musculature, myalgia, and weight loss are often prominent manifestations.

Non-arteritic AION is frequently associated with a history of hypertension in patients over the age of 50 (1,4). The funduscopic and visual abnormalities may be similar to those of patients with temporal arteritis, but the ESR is normal and there are no systemic symptoms. Additional but rare causes include migraine (5), glaucoma (6), internal carotid artery occlusion (7), recurrent blood loss (8), shock (9), cataract extraction (10), iron deficiency anemia (11), and delayed radionecrosis (12).

Visual loss in AION is most commonly altitudinal or an incomplete nasal quadrantanopia. There is predilection for involvement of the inferior field, and less often central scotomata are seen. Visual acuity may be unaffected in as many as 20% of patients (1).

The three patients described in this article developed the characteristic funduscopic findings and visual loss of AION within five days of CAB. Two patients had unilateral involvement with either nasal or inferior visual loss, and one patient had asymmetric bilateral inferior altitudinal visual loss. All had initially elevated ESRs ranging from 70 mm/hr to 131 mm/hr. Two patients received no specific treatment and showed clinical improvement. One patient was treated with prednisone without benefit. The course of all three patients was consistent with non-arteritic AION. We subsequently surveyed the ESR using the Westergren method on ten patients over 50 years of age within five days of uncomplicated CAB. The ESR ranged from 11 mm/hr to 77 mm/hr with an average of 44 mm/hr. Only three patients had an ESR of less than 40 mm/hr. Consequently, our experience indicates that the ESR in the immediate postoperative period cannot be relied upon to distinguish arteritic from

non-arteritic forms of AION. From a practical viewpoint, the chance of temporal arteritis occurring without prodrome immediately after elective CAB must be exceedingly remote.

The vascular supply of the optic nerve and disk are derived from two or three posterior ciliary arteries that arise from the ophthalmic artery and the pial arterioles (13–15). The blood supply is dependent on the perfusion pressure in these vessels (mean blood pressure minus intraocular pressure). Extracranial ipsilateral carotid stenosis, anemia, and controlled intraoperative hypotension may have been provoking factors for AION when associated with unilateral posterior ciliary artery disease in two of our patients. Our third patient probably had a microembolic encephalopathy, thus suggesting embolic occlusion of enough posterior ciliary and pial vessels to cause bilateral optic nerve infarction. One study has confirmed that embolism can produce optic nerve infarction (16).

REFERENCES

1. Boghen DR, Glaser JS: Ischaemic optic neuropathy. The clinical profile and history. Brain 98(4):689–708, 1975.
2. Sweeney PJ, Breuer AC, Selhorst JB, et al: Ischemic optic neuropathy: a complication of cardiopulmonary bypass surgery. Neurology 32(5):560–562, 1982.
3. Brennan RW, Patterson RH Jr, Kessler J: Cerebral blood flow and metabolism during cardiopulmonary bypass: evidence of microembolic encephalopathy. Neurology 21(7):665–672, 1971.
4. Ellenberger C Jr: Ischemic optic neuropathy as a possible early complication of vascular hypertension. Am J Ophthalmol 88(6):1045–1051, 1979.
5. Weinstein JM, Feman SS: Ischemic optic neuropathy in migraine. Arch Ophthalmol 100(7):1097–1100, 1982.
6. Begg IS, Drance SM, Sweeney VP: Ischaemic optic neuropathy in chronic simple glaucoma. Br J Ophthalmol 55(2):73–90, 1971.
7. Waybright EA, Selhorst JB, Combs J: Anterior ischemic optic neuropathy with internal carotid artery occlusion. Am J Ophthalmol 93(1):42–47, 1982.
8. Chisholm IA: Optic neuropathy of recurrent blood loss. Br J Ophthalmol 53(5):289–295, 1969.
9. Drance SM, Morgan RW, Sweeney VP: Shock-induced optic neuropathy: a cause of nonprogressive glaucoma. N Engl J Med 288(8):392–395, 1973.
10. Hayreh SS: Anterior ischemic optic neuropathy. IV. Occurrence after cataract extraction. Arch Ophthalmol 98(8):1410–1416, 1980.
11. Laibovitz RA: Reversible ischemic optic neuropathy in severe anemia. Tex Med 78(1):56–58, 1982.
12. Egbert PR, Fajardo LF, Donaldson SS, et al: Posterior ocular abnormalities after irradiation for retinoblastoma: a histopathological study. Br J Ophthalmol 64(9):660–665, 1980.
13. Hayreh SS, Baines JAB: Occlusion of the posterior ciliary artery. Br J Ophthalmol 56:719–735, 1972.
14. Anderson DR, Davis EB: Retina and optic nerve after posterior ciliary artery occlusion. Arch Ophthalmol 92:422–426, 1974.
15. Ellenberger C Jr, Netsky MG: Infarction of the optic nerve. J Neurol Neurosurg Psychiatry 31(6):606–611, 1968.
16. Lieberman MF, Shahi A, Green WR: Embolic ischemic optic neuropathy. Am J Ophthalmol 86(2):206–210, 1978.

Coming in September:

ONCOLOGY GUIDELINES REPORT

". . . a physician's perspective of a rapidly-changing field . . . pragmatic set of guidelines for busy physicians who need to make decisions regarding primary care, consultation, or referral . . . most current experience on optimal care for the cancers most frequently encountered . . ."

Developed by 87 cancer specialists from all regions of the state, working as part of the Legislative Task Force on Cancer in Texas.

Yours with *Texas Medicine*'s double issue in September.

Watch for it!

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

When citing clinical laboratory data, please report in conventional units, followed in parentheses by Systeme International (SI) units.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine.*

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within one month of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine.*

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

JOHN H. LILES, MD

Update on thyroid function testing

This article summarizes the latest developments in thyroid function testing using the radioimmunoassay (RIA) technique, which directly measures free-thyroxine (FT_4). A brief review of tests using RIA is offered to simplify thyroid function testing. FT_4-RIA should make the resin T_3 uptake, used for calculating the estimate of FT_4, obsolete. The tests and their use and interpretation in hyperthyroidism and hypothyroidism are summarized; a method of differentiating primary, secondary, and tertiary hypothyroidism is also provided.

John H. Liles, MD, 1707 Rabb Rd, Austin, TX 78704.

The development of radioactive isotopes of iodine has resulted in several thyroid function tests that may be confusing to many physicians. Radioimmunoassay (RIA) is a technique that allows direct measurement of the thyroid hormones and thyroid stimulating hormone (TSH). Although not yet perfect, the RIA technique is far superior and has outdated the basal metabolism rate (BMR), protein-bound iodine (PBI), and butanol extractable iodine (BEI) tests.

In 1981 the laboratory service of the VA Medical Center in Waco, Tex, began using a panel for thyroid function testing comprised of the following: T_4-RIA, T_3-RIA, and TSH-RIA. At that time a new kit for free-tetraiodothyronine (FT_4), using the radioimmunoassay technique, was released to the market. An extensive correlation study was done comparing the FT_4-RIA with T_4-RIA and the other tests in the existing panel. The results revealed that FT_4-RIA did not vary with fluctuations in carrier proteins, confirming the claim of the manufacturer. Because of its superior performance, the FT_4-RIA was selected for the panel, replacing the T_3-RIA. During the following four-year period, the FT_4-RIA, T_3-RIA, and TSH-RIA panel proved to be quite reliable and well accepted by the medical staff.

Many laboratories now perform resin-T_3-uptake and free-T_4 index studies. They report a free-T_4 index obtained by multiplying the serum T_4 value by the resin-T_3-uptake value (FT_4 index = T_4 X RT_3 uptake) (2). This is an indirect method of estimating the free-T_4 (FT_4). Until recently the only method of directly measuring FT_4 was by equilibrium dialysis (1). This is time-consuming and confined primarily to a few reference laboratories. Now that the serum FT_4 value can be directly and easily measured by RIA, there should be no need for the FT_4 index done by calculation.

Serum transport of thyroid hormones

Tetraiodothyronine is commonly called thyroxine or T_4. Triiodothyronine is commonly called T_3. FT_3 is the term used for free-T_3, and FT_4 is the term used for free-T_4. T_3 and T_4 are transported in the serum in two forms: protein-bound and free. T_4 is 99.98% bound to the proteins, globulin, prealbumin, and albumin, with the remaining 0.02% transported as free, unbound. T_3 is transported 99.8% bound to globulin and albumin with the remaining 0.2% as free, unbound (1). The larger percent of T_4 is bound to globulin (thyroid-binding globulin, or TBG). Although small in concentration, FT_3 and FT_4 are the physiological active forms (1). As FT_3 and FT_4 are dissipated in their actions, more is released from the protein-bound state to replace them and restore the ratio between protein-bound and free hormone.

About 15% to 20% of the circulating T_3 is derived directly from the thyroid gland while the remainder is derived from the peripheral tissues by conversion of T_4 to T_3. T_4 is converted to T_3 in the tissues by removal of one of the four iodine atoms from the T_4 molecule. In both the hyperthyroid and hypothyroid states, the amount of T_3 derived from the thyroid gland directly is less than the amount derived from T_4 conversion in the peripheral tissues (1).

Regulation of thyroid function

Thyrotropin, or thyroid stimulating hormone (TSH), and the iodine level within the thyroid are the two major factors controlling the secretion of T_3 and T_4 by the thyroid. TSH, a glycoprotein hormone secreted by the anterior pituitary, acts upon the follicular epithelial cells to drive all of the steps concerned with T_3 and T_4 synthesis. TSH secretion is modulated by the serum levels of free thyroid hormones and the intrathyroid stores of iodine. TSH secretion is initiated by action upon the anterior pituitary by another hormone, thyrotropin-releasing factor (TRF), secreted by cells in the hypothalamus.

If a diseased thyroid secretes insufficient T_3 and T_4 hormones to support a euthyroid state, the normal anterior pituitary quickly senses this insufficiency and secretes increased amounts of TSH, and primary hypothyroidism has developed. This is characterized by reduced serum levels of T_3, FT_4, T_4 and increased levels of TSH. If the anterior pituitary is diseased (tumor, infarct, etc) and cannot secrete enough TSH, there is inadequate thyroid secretion of T_3 and T_4. This condition is called secondary hypothyroidism. A syndrome called tertiary hypothyroidism recently has been described in which there is a functional deficiency of the hypothalamus, resulting in insufficient secretion of thyrotropin-releasing factor (TRF) (1). When this occurs, the serum values of T_3, T_4, FT_4, and TSH are reduced the same as with secondary hypothyroidism. Most cases of hypothyroidism are of the primary type, caused by a failure of the thyroid itself. Secondary and tertiary hypothyroidism are rare and often associated with signs and symptoms of other endocrine deficiencies caused by failure of anterior pituitary func-

tion (hypogonadism, hypoadrenalism). It is possible to differentiate secondary and tertiary hypothyroidism by intravenous injection of a synthetic TRF, a test to be described later.

Thyroid function tests

The primary purpose of function tests is to determine the amount of production of thyroid hormones. Clinical assessment of the patient is the first step to be made. If there is no clinical suspicion of abnormal thyroid function, the tests are not ordinarily indicated. Routine screening tests have not been found to be productive or cost-effective. If there is clinical evidence of abnormal thyroid function, properly selected tests combined with good clinical judgment should provide the optimum interpretation. No function test is ideally suited in all circumstances (1). Laboratory tests are designed to be used by the physician to confirm the diagnosis—not to make it. Most of the time, the physician will wish to confirm a diagnosis of hyperthyroidism or hypothyroidism. Abnormal physical changes found in the thyroid gland, such as goiter or nodules, require special consideration in addition to function tests.

Of the several laboratory thyroid function tests available, the serum free thyroxine (FT_4), T_3, and TSH levels performed by the RIA technique are probably the most specific and reliable. Serum TSH levels are necessary to confirm low serum levels of FT_4 and T_3 in hypothyroidism. Serum levels of TSH are usually normal in euthyroid and hyperthyroidism states. Expected normal values are listed in Fig 1.

Total serum thyroxine T_4-RIA (4.5-11.5 μg/dL)

The serum level of T_4-RIA offers results usually reflecting the true functional state of the thyroid. High serum levels are found in about 90% of hyperthyroid cases and low serum levels in about 85% of hypothyroid cases (1). This test measures thyroid hormone and not iodine, so the results are free of the inaccuracies of the PBI and BEI tests formerly used. The serum level of T_4-RIA is quite accurate and widely available. The physician, however, must be alert to increases or decreases of the serum levels of thyroid-binding proteins, which may cause inappropriate errors to occur in some seriously ill patients. Conditions and medications associated with elevated TBG serum levels are: acute infectious hepatitis, oral contraceptives, pregnancy, and estrogens. Conditions and biochemicals that can lower the level of TBG are androgens, nephrotic syndrome, acromegaly, and any causes of hypoproteinemia. Some drugs taken by the patient also may alter the laboratory values (1).

1. Expected normal RIA serum values.

T_3-RIA	75-220 ng/mL (1.2-3.4 nmol/L)
T_4-RIA	4.5-11.5 μg/dL (51.5-148 nmol/L)
FT_4-RIA	0.8-2.3 ng/mL (10.3-29.6 pmol/L)
TSH-RIA	0.0-10.0 μU/mL (0.0-10.1 mU/L)

Free-tetraiodothyronine FT_4 (0.8-2.3 ng/dL)

FT_4-RIA is emerging as a very promising new technique. Although only about 0.02% of serum thyroxine (T_4) is free and unbound to proteins, it is this portion of T_4 hormone that is physiologically active. Because FT_4 is unaffected by varying levels of carrier proteins and is the active portion of the T_4 hormone, its direct measurement is highly desirable. This test will probably soon replace the T_4-RIA and the T_3 resin uptake tests.

Triiodothyronine T_3-RIA (75-220 ng/dL)

In addition to T_4, the thyroid secretes and releases a small amount of T_3, which is about 15% to 20% of the circulating T_3. The remainder of the circulating T_3, about 30 μg/day, is derived from the conversion of T_4 in tissues other than thyroid. In hyperthyroidism, serum T_3 levels have been known to rise earlier than serum T_4 levels. In fact, in some patients with hyperthyroidism, serum T_3 may be the only thyroid hormone produced in excess (1).

In a variety of conditions, such as gestation, cirrhosis, uremia, malnutrition, stress of acute and chronic diseases, and during steroid therapy, the conversion of T_4 to T_3 may be altered. Under these conditions, an iodine atom may be removed from a different position on the T_4 molecule than usual to form a molecule called reverse-triiodothyronine (rT_3) (Fig 2). Reverse-T_3 (rT_3) is physiologically inactive. Since a significant amount of the available serum T_4 may be inappropriately converted to rT_3 instead of to T_3, and since rT_3 is not measured by the T_3-RIA procedure, the serum T_3 level will be low. In such a situation, the FT_4 and TSH serum levels should be normal (1). If so, the inappropriate conversion of T_4 to rT_3 could be the answer for the low T_3, if there is no technical error in the test procedure. This would be a situation where a low serum T_3 level would not indicate a hypothyroid state. A normal serum TSH level would be maintained by the presence of a normal serum FT_4 level.

In primary hypothyroidism, one usually expects to see serum levels of T_3 below normal, but this has been found in only about 50% of such cases. This may be due to the fact that the failing thyroid may secrete more T_3 than T_4, which could result in normal or marginally low levels of serum T_3, but low serum levels of FT_4 and T_4 (1). This should result in some elevation of the serum level of TSH, compatible with hypothyroidism (1).

Thyroid stimulating hormone TSH-RIA (0-10.1 μU/mL) (0-10 mU/L)

TSH is a glycoprotein hormone secreted by the basophil cells of the anterior pituitary. TSH can be measured in the serum by the RIA technique. TSH production is largely controlled by thyrotropin-releasing factor (TRF) secreted by the hypothalamus, situated at the base attachment of the pituitary stalk. TRF flows to the pituitary through the venous plexus of the pituitary stalk. Serum levels of FT_3 and FT_4 also influence the pituitary secretion of TSH. Low serum levels of FT_3 and FT_4 stimulate release of TSH. High serum levels inhibit its release. It is believed that the serum levels of FT_3 and FT_4 also control the secretion of TRF (1).

Decreases in serum levels of FT_3 and FT_4 too small to accurately measure cause stimulation of the pituitary secretion of TSH. A high level of serum TSH is the best indicator of primary hypothyroidism, and this occurs even before other thyroid function tests are found to be abnormal (1). Serum levels of TSH are not elevated in hyperthyroidism.

Principal uses of serum TSH-RIA values

1. Serum TSH-RIA measurement in primary hypothyroidism is most valuable. A normal level of serum TSH virtually excludes primary hypothyroidism, although this test alone should not be the only test used to confirm the diagnosis. Serum TSH levels in primary hypothyroidism are almost always 20 μU/mL (20 mU/L), or higher.

2. Subclinical hypothyroidism may occur in association with Hashimoto's chronic thyroiditis, iodine-deficiency goiter, and iodine-induced goiter, and following treatment of Grave's disease by thyroidectomy or radioactive iodine. In the early stages, such patients may have high normal serum levels of TSH, which slowly continue to rise if the hypothyroid state continues.

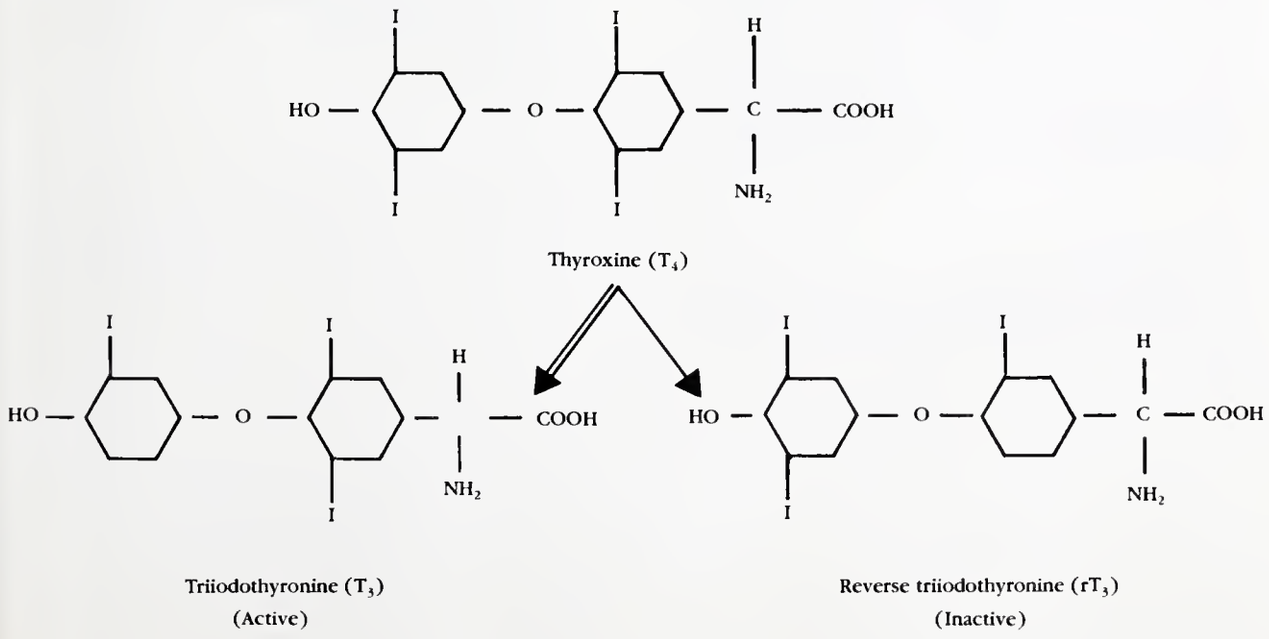
3. Serum TSH levels are useful in evaluating replacement hormone therapy. When hypothyroid patients receive adequate exogenous hormone therapy, the serum TSH levels should slowly return to normal. Failure of the serum TSH levels to return to normal, despite apparently adequate doses of thyroid hormone, may indicate that the patient is failing to comply with the prescription, a fact not uncommon.

4. If the known hypothyroid patient with low serum levels of the thyroxins has a normal or low serum TSH level, a disorder of either the pituitary or hypothalamus is implied. Use of the TRF challenge test, described later, will allow differentiation (1,2).

5. Serum TSH levels may be of value in identifying the borderline case of hyperthyroidism. Normal adult, euthyroid patients, when injected with 200 μg of TRF, show some rise in serum TSH, but hyperthyroid patients do not. This is because only a slight rise in thyroid hormones is sufficient to suppress the pituitary secretion of TSH (1).

Confirmation of hyperthyroidism

Serum FT_4 and T_3 levels by RIA confirms hyperthyroidism in at least 98% of the cases. Measure-



2. Conversion of thyroxine (T_4) to triiodothyronine (T_3) or reverse triiodothyronine (rT_3). Iodine can be removed from the thyroxine molecule (top) to form either T_3 (left) or rT_3 (right). The T_3 molecule is active, but the rT_3 molecule is inactive. RIA assays measure only the T_3 in the serum (1).

ment of the serum T_3 level is indicated because, as previously stated, some hyperthyroid patients show only increased serum levels of T_3, and not FT_4 or T_4. This has been called "T_3 thyrotoxicosis."

Confirmation and differentiation of types of hypothyroidism

The vast majority of patients with hypothyroidism have the primary type due to failure of the thyroid gland to secrete sufficient T_3 and T_4. If the patient is taking T_3 or phenytoin (Dilantin) medication, the FT_4 serum level may be slightly depressed by the drugs, and the patient may actually be euthyroid. If the patient does not take medication and if the serum levels of FT_4 and T_3 are low, a serum TSH test should be performed. If the serum level of TSH is 20 μU/mL, or higher, the evidence is strong for a diagnosis of primary type hypothyroidism.

If the serum levels of thyroid hormones are low and the serum TSH is normal or low, the patient may have either secondary (pituitary) or tertiary (hypothalamic) hypothyroidism. The TRF challenge test may be used to differentiate the two.

Thyrotropin-releasing factor (TRF) test

To differentiate between secondary (pituitary) and tertiary (hypothalamus) hypothyroidism, the patient can be given a synthetic hormone, called thyrotropin-releasing factor (TRF). This hormone has the same effect upon the pituitary as the native or natural TRF secreted by the hypothalamus. The amount given intravenously to the adult is usually 500 μg. Blood serum is obtained just prior to injection of the TRF for a baseline TSH-RIA. Additional samples are drawn at 20 minutes and at 60 minutes after the hormone is injected. If the pituitary can respond normally, the 20-minute serum level of TSH will rise to about twice the level of the 60-minute serum level. When the hypothalamus is at fault, there will be a delayed response and the 60-minute serum level of TSH will be higher than in the 20-minute sample (1).

REFERENCES

1. Federman DD: Endocrinology. New York, Scientific American Medicine, 1985.
2. Davidsohn I, Henry B: Clinical Diagnosis by Laboratory Methods, ed 15, Philadelphia, W. B. Saunders Co, 1974.

Coming in September:

ONCOLOGY GUIDELINES REPORT

". . . a physician's perspective of a rapidly-changing field . . . pragmatic set of guidelines for busy physicians who need to make decisions regarding primary care, consultation, or referral . . . most current experience on optimal care for the cancers most frequently encountered . . ."

Developed by 87 cancer specialists from all regions of the state, working as part of the Legislative Task Force on Cancer in Texas.

Yours with *Texas Medicine*'s double issue in September.

Watch for it!

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

EDWARD G. FORD, MD

L. MICHELLE JENNINGS, BS

RICHARD J. ANDRASSY, MD

Management of Henoch-Schönlein purpura and polyarteritis nodosa

Edward G. Ford, MD, L. Michelle Jennings, BS, Richard J. Andrassy, MD, Division of Pediatric Surgery, Department of Surgery, The University of Texas Health Science Center at Houston and The University Children's Hospital at Hermann, Texas Medical Center, Houston. Send reprint requests to Dr Ford, 6431 Fannin, Suite 6.264, Houston, TX 77030.

Henoch-Schönlein purpura (HS) and polyarteritis nodosa (PAN) are collagen/vascular diseases that affect children and young adults. The etiology of these diseases is uncertain. The presenting symptom complex may be vague, but usually includes abdominal pain caused by vascular lesions of the splanchnic bed. HS produces ulceration, thrombosis, and ischemia of small arteries and arterioles; PAN causes narrowing, obstruction, and thrombosis with infarction of small and medium-sized arteries. The treatment of these diseases includes the administration of glucocorticoids and/or cyclophosphamide. The side effects of these medications (gastrointestinal ulceration and perforation) may themselves be the source of abdominal pain. The different microvascular lesions of HS and PAN lead to somewhat characteristic intra-abdominal surgical pathology. Patients with HS are prone to intussusception whereas those with PAN more commonly undergo aneurysm formation in the splanchnic, renal, and cerebrovascular beds. Victims of both diseases may suffer gastrointestinal ulceration, hemorrhage, or perforation.

Management of the patient with collagen/vascular disease who presents with abdominal pain may be difficult. The attending physician must decide whether the symptom complex represents an acute surgical abdomen, or whether the complaints are simply referable to acute microvascular changes not requiring surgical intervention. The attending physician should enlist the services of a surgeon when presented with such a problem. If the symptom complex does not show rapid resolution, or if there is serious doubt as to the source of abdominal pain, then the patient should undergo exploratory celiotomy. We discuss the most common surgical complications of HS and PAN and briefly discuss their management.

The etiology of childhood inflammatory diseases of the connective tissues (collagen/vascular diseases) is unclear. Each of the disorders (Fig 1) has characteristic symptomatology and a distinct clinical picture. However, these diseases may affect several organ systems and may display a variety of signs and symptoms which, at times, makes precise diagnosis difficult. The childhood collagen diseases with a major vascular component are Henoch-Schönlein vasculitis (HS) and polyarteritis nodosa (PAN). These are two distinct clinical diseases, but each may have a wide range of presenting symptoms (Fig 2) (1). The precise diagnosis becomes important when the disease leads to an acute intra-abdominal problem. In HS and PAN the patient's aberrant metabolism leads to pathologic changes in the vascular system resulting in vascular ulceration, aneurysm formation, thrombosis, and subsequent end organ ischemia and necrosis (2,3). The primary effect of these syndromes is on different sized vascular structures (4). The larger the size of the vessel compromised, the greater the extent of damage to the end organ. Major intra-abdominal end organ damage (PAN) may require surgical intervention, whereas small-vessel disease (HS) may not require surgical intervention (Fig 3).

One hundred sixty cases of patients with a diagnosis of HS were recently reviewed (5). Purpuric rash, colicky abdominal pain, gastrointestinal hemorrhage, and joint pain occurred in 46% of the patients. A rash and/or arthralgia were present in 72% of the patients, and the diagnosis was straightforward. Fifty-six percent of the patients presented with abdominal complaints (pain, hematemesis, melena, rectal bleeding). Thirteen percent of the patients had abdominal pain alone for up to two months before the onset of characteristic signs and symptoms of HS (5).

There are no characteristic signs and symptoms of PAN, and presenting complaints may be vague. Fifty to sixty percent of patients present with abdominal complaints (abdominal pain, diarrhea, stools positive for occult blood, nausea and vomiting) (2,6,7).

The gastrointestinal complaints of HS and PAN may be a result of obvious segments of ischemic viscera approachable by surgical intervention, or may be the result of microvascular disease, in which case the surgeon may be confronted with a macroscopically normal exploratory laparotomy. In the case of a negative laparotomy, tissue for diagnosis becomes essential.

Intussusception

Intussusception, the most common surgical complication of HS, is present in 6% of disease cases (8). The development of an intussusception is usually marked by gastrointestinal bleeding, increasing abdominal pain, and an abdominal mass on physical examination. Fifty percent of intussusceptions are ileoileal and a lead point has been demonstrated in approximately 5% of the cases (5,9). The proposed etiology involves increased capillary fragility, hemorrhage, mucosal and submucosal edema leading to paresis, interruption of normal peristalsis, and a resulting intussusception.

In HS, and occasionally PAN, the adynamic section of bowel will act as the intussusceptum. As the bowel telescopes through the more distal bowel the mesentery becomes trapped, angulated, and compressed. Venostasis and edema lead to swelling, vascular compression, and even more venous compromise. Goblet cells discharge mucus mixed with blood from hemorrhagic segments, leading to the

characteristic currant-jelly stool. As the edema, swelling, and necrosis proceed, the bowel may undergo perforation. Intussusception may also be a complication of polyarteritis nodosa; however, the incidence is much below that found in HS (6).

The child suffering from intussusception usually lies quietly and may appear apathetic and listless. Children may exhibit intermittent periods of obvious colicky abdominal pain as peristaltic activity moves the intussusceptum through the bowel. Physical examination of the abdomen usually reveals a soft, nontender abdominal wall. A mass is palpable in approximately 85% of patients. By the time the mass becomes palpable, the intussusceptum is of such length that the mass takes on a characteristic "sausage" shape. High fever, with a normal pulse rate, and leukocytosis are characteristic, but not diagnostic. Although some authors support the effectiveness of sonography and computed tomography in an evaluation, 100% of cases may be diagnosed, and some cases treated, by the use of a barium enema.

Treatment may be considered empiric, conservative, and/or operative. Empiric treatment of an acute abdomen is similar, despite the etiology. Intravenous fluids are required to replace tissue losses through edema and third spacing. Broad spectrum antibiotic coverage is indicated in all cases of suspected perforated bowel.

The next step in management involves diagnosis; we prefer the use of the barium enema because of its high sensitivity and specificity. Once the diagnosis has been made, the child may be treated conservatively or operatively. In either approach the intussusception must be reduced.

Conservative management supports the use of the diagnostic barium enema, with controlled hydrostatic pressure, to cause reduction (10). The use of this method has been advocated for 50 years and is most successful when the intussusception is in its early phase (11–13). Complications of barium enema reduction include perforation of the bowel distal to the intussusception or through a necrotic segment of previously intussuscepted bowel. The reduction must be done under fluoroscopic guidance and by an experienced physician. An operating room must be immediately available in case of bowel perforation. Anesthesia or sedation are discouraged as they may mask symptoms of an occult perforation. If operation is necessary, the intussusception is identified and gentle manual reduction attempted. If the bowel resists or if the bowel is found to be gangrenous on reduction, then the compromised bowel should be resected and primarily anastomosed (14).

1. The collagen/vascular diseases of childhood. Modified from McCauley and colleagues (2).

Hypersensitivity vasculitis
Serum sickness and serum sickness-like reactions
Henoch-Schönlein purpura
Essential mixed cryoglobulinemia with vasculitis
Vasculitis associated with malignancies
Polyarteritis nodosa group
Classic polyarteritis nodosa
Cutaneous polyarteritis nodosa
Allergic angitis and granulomatosis
Polyangiitis-overlap syndrome
Giant cell arteritides
Temporal arteritis
Takayasu's arteritis
Wegener's granulomatosis
Lymphomatoid granulomatosis
Thromboangiitis obliterans
Mucocutaneous lymph node syndrome

2. Comparison of symptom complex and pathophysiology of Henoch-Schönlein purpura (HS) and polyarteritis nodosa (PAN).

	HS	PAN
Etiology	?	?
Onset Age	3–7 years old (rarely under 2 yrs or over 20 yrs)	Middle age
Sex	Male: Female, 2:1	Predominantly males
Characteristic Symptoms	Purpuric rash Colicky abdominal pain Nausea and emesis Hematochezia or occult blood	Fever Hypertension Periumbilical abdominal pain Nausea and emesis
Associated Problems	CNS involvement Renal compromise Joint pains	Renal compromise Pancreatitis
Vascular Lesions	Ulceration, thrombosis and ischemia of small arteries and arterioles	Narrowing, obstruction or thrombosis and infarction of small and medium sized arteries/veins

3. Surgical complications of Henoch-Schönlein (HS) purpura and polyarteritis nodosa (PAN).

HS	PAN
Intussusception	Splanchnic aneurysm
Ischemic bowel	Bowel ulceration
Bowel necrosis	Bowel perforation
Bowel perforation	Appendicitis
GI hemorrhage	Cholecystitis
	GI hemorrhage

Intestinal ischemia, infarction, and perforation
HS or PAN may cause compromise of blood supply to the bowel sufficient to allow necrosis and subsequent perforation.

Intramural hemorrhage with resultant mucosal and submucosal ulceration and subsequent perforation is seen in HS (15). Such ulcerations and perforation may occur anywhere along the gastrointestinal tract, with some reports of a higher predilection in the ileal region (16). Although extremely rare, similar lesions may occur in the colon and rectum (10,17).

The lesions of HS are usually focal, whereas the lesions of PAN involve larger segments of bowel (18). The pathologic processes of polyarteritis nodosa involve the larger arteries; thrombosis of these larger abdominal vessels causes pathologic changes in larger end organs as compared with HS. Ischemic changes to large segments of bowel with resulting infarction and perforation are seen in PAN (6,7,19). These lesions occur in all parts of the gastrointestinal tract, predominately ileocolonic and cecal, with approximately 10% of the lesions being rectosigmoid (6).

The signs and symptoms of bowel perforation are dramatic. Spillage of the intestinal contents into the abdomen causes a reactive peritonitis. Leukocytosis, fever, and abdominal pain are evident. The pain is diffuse, and often associated with guarding and rebound. Peritonitis causes the loss of large amounts of intravascular fluid as edema into the intra-abdominal third space. Resultant dehydration and fever usually lead to tachyphylaxis.

The treatment of intestinal perforation involves exploring the abdomen through a midline or transverse incision, which allows access to all portions of the abdominal cavity including areas of dependent drainage (left and right subphrenic spaces, subhepatic space, lesser sac, and pelvis). Segments of compromised bowel in PAN are immediately evident; the smaller lesions of HS may be more difficult to identify. Water placed in the abdominal cavity will identify occult areas of perforation by air bubbles escaping from the intraluminal bowel. Segments of obviously perforated bowel must be excised. The level of the perforation indicates whether the procedure should be staged. Smaller children poorly tolerate high gastrointestinal enterostomies; therefore, primary anastomosis may be indicated. Perforation of the lower bowel, including the colon, is usually best treated by externalization of the perforation or by a diverting proximal ostomy. As stated earlier, empiric management of the acute abdomen should include resuscitative intravenous fluids and broad-spectrum antibiotics. In the patient with a perforation and subsequent resection, the antibiotics should be continued for an extended postoperative period (7 to 14 days). The child should be supported with intravenous nutrition until the anastomoses have healed and normal gastrointestinal function has returned.

HS usually follows a self-limiting and benign course. Although the treatment remains controversial, the use of steroids in the treatment of gastrointestinal complaints is common. In the steroid-treated patient presenting with abdominal pain, one must consider the possibility of gastric or duodenal ulceration and/or perforation (5).

The treatment of polyarteritis nodosa is also debatable. The gastrointestinal complaints may be treated with cyclophosphamide or prednisone (20). The child suspected of having PAN and being treated with these agents and who later presents with abdominal pain must likewise be considered to have an intestinal perforation and undergo aggressive treatment (2,21,22).

Aneurysm formation
Aneurysm formation in the splanchnic arterial bed is a common complication of polyarteritis nodosa (23). Aneurysms may also be found in arteries of the brain, heart, and kidneys (24,25). Most are less than 5 mm in diameter; however, large sacculations (6 to 12 mm) have been reported. Rupture of the intramural arteries of the gastrointestinal tract may lead to massive gastrointestinal hemorrhage. Ruptured aneurysms more commonly are found in the perinephric (26) and mesenteric arterial systems (27), but scattered reports of hepatic aneurysm rupture are available (28,29).

Surgical management of these lesions necessitates precise localization of the lesion with contrast angiography or nuclear blood flow studies. Ruptures found in end organs may then be resected; those ruptures of more proximal vessels may be resected and vascular repair undertaken.

Pancreatitis
Four cases of pancreatitis complicating HS purpura have been reported to date (30–33). The pathologic mechanism is presumably vasculitis of the small vessels within the pancreas leading to inflammation. Pancreatitis is rarely a presenting feature in polyarteritis nodosa (34,35); however, 50% of autopsied patients have shown some pancreatic involvement. The pathologic changes include focal ischemia, necrosis, and diffuse fibrosis. The child with pancreatitis may have a variety of complaints including abdominal pains associated with nausea and vomiting. If, in the patient with pancreatitis, another acute intra-abdominal process cannot be explicitly ruled out, then exploratory laparoscopy is indicated. Management of pancreatitis per se involves mainly nutritional and metabolic support.

Summary

The management of childhood collagen/vascular diseases may be aggravating for the attending physician since these diseases have no precise etiology or definitive medical or surgical therapy. In a substantial portion of patients, the disease process includes complaints of abdominal pain. Such pain may be a result of the disease itself, or a complication of steroid and/or cyclophosphamide treatment. The pain may be clinically insignificant, or it may be a clue to impending catastrophic events. Considering the wide variety of problems that may be encountered, the physician caring for a child suffering from vasculitis who complains of abdominal pain should enlist the aid of a surgeon (2). The child should be observed, thoroughly examined, and undergo diagnostic laboratory evaluation. The most important aspect of the evaluation should be a concise physical examination. The impressions of the clinical state of the child are only supported by laboratory evaluation, not vice versa. Immediate surgical intervention is indicated in the obviously acute abdomen. The surgeon should address obvious intra-abdominal pathology with time-honored standards of treatment. Intussusception should be carefully reduced, gangrenous bowel resected, and obvious areas of perforation closed or resected. If during laparotomy there is no obvious macroscopic disease, tissue should be collected for microscopic evaluation. The child with abdominal pain who does not have a clinical or laboratory indication for laparotomy should be closely observed (36). Observation should include frequent physical examinations by the original examining physician and frequent laboratory evaluation. Conservative treatment is acceptable until the clinical condition deteriorates; at that point laparotomy is indicated (37).

In managing a child under expectant treatment for abdominal complaints of HS or PAN, the physician must be aware of the side effects of medications employed (2). The glucocorticoids and cyclophosphamide themselves may cause ischemia in segments of bowel, gastrointestinal ulceration with perforation, or ulceration with bleeding. Evaluation in these patients may be tailored to search for pathologic consequences of treatment rather than beginning anew.

As with most disease processes, meticulous attention to detail is fundamental to expedient evaluation, decision-making, and comprehensive management of childhood disease.

REFERENCES

1. Blau EB, Morris RF, Yunis EJ: Polyarteritis nodosa in older children. Pediatrics 60(2):227–234, 1977.

2. McCauley RL, Johnston MR, Fauci AS: Surgical aspects of systemic necrotizing vasculitis. Surgery 97(1): 104–110, 1985.

3. Robbins SL: Polyarteritis nodosa (periarteritis nodosa, panarteritis nodosa), in Pathologic Basis of Disease. Philadelphia, W. B. Saunders, 1974, p 236.

4. Keys RC: Polyarteritis nodosa in the acute abdomen. J R Coll Surg Edinb 21(6):341–344, 1976.

5. Harvey JG, Colditz PB: Henoch-Schönlein purpura—a surgical review. Aust Pediatr J 20(1):13–16, 1984.

6. Wood MK, Read DR, Kraft AR, et al: A rare cause of ischemic colitis: polyarteritis nodosa. Dis Colon Rectum 22(6):428–433, 1979.

7. Lopez LR, Schocket AL, Stanford RE, et al: Gastrointestinal involvement in leukocytoclastic vasculitis and polyarteritis nodosa. J Rheumatol 7(5):677–684, 1980.

8. Toledo-Pereyra LH, Von Reuden T, Cich JA, et al: Management of intra-abdominal Henoch-Schönlein purpura. The role of surgery. Minn Med 59(6):376–379, 1976.

9. Daneman A, Reilly BJ, de Silva M, et al: Intussusception on small bowel examinations in children. A J R 139(2):299–304, 1982.

10. Glasier CM, Siegel MJ, McAlister WH, et al: Henoch-Schönlein syndrome in children: gastrointestinal manifestations. AJR 136(6):1081–1085, 1981.

11. Hirschsprung H: Tilfaelde of subakut tarminvagination. Hospitalstid 3:321, 1876.

12. Hirschsprung H: 107 Fälle von Darminvagination bei Kindern, behandelt im Königin Louisen-Kinderhospital in Kopenhagen während der Jahre 1871–1904. Grenzgeb d Med u Chir Jena, 14:555–574, 1905.

13. Hipsley PL: Intussusception and its treatment by hydrostatic pressure, based on an analysis of 100 consecutive cases so treated. Med J Aust 2(7):201–206, 1926.

14. Ravitch MM: Intussusception, in Ravitch MM, Welch KJ, Benson CD, et al (eds): Pediatric Surgery. Chicago, Year Book Medical Publishers, Inc, 1979, pp 989–1003.

15. Smith HJ, Krupski WC: Spontaneous intestinal perforation in Schönlein-Henoch purpura. South Med J 73(5):603–610, 1980.

16. Lindenauer SM, Tank ES: Surgical aspects of Henoch-Schönlein's purpura. Surgery 59:982–987, 1966.

17. Novy SB, Weaver RM, Jensen KM, et al: Henoch-Schönlein purpura of the colon: an unusual gastrointestinal manifestation. South Med J 70(7):884–886, 1977.

18. Meyer GW, Lichtenstein J: Isolated polyarteritis nodosa affecting the cecum. Dig Dis Sci 27(5):467–469, 1982.

19. Zizic TM, Classen JN, Stevens MB: Acute abdominal complications of systemic lupus erythematosus and polyarteritis nodosa. Am J Med 73(4):525–531, 1982.

20. Fauci AS, Haynes B, Katz P: The spectrum of vasculitis. Ann Intern Med 89(5 Pt 1):660–676, 1978.

21. Levin MH, Rivo JB, Scott W, et al: The prolonged treatment of rheumatoid arthritis with cortisone and corticotropin. Am J Med 14:265–274, 1953.

22. Parker RA, Thomas PM: Intestinal perforation and widespread arteritis in rheumatoid arthritis during treatment with cortisone. Br Med J 1:540–542, 1959.

23. Sirridge WT, Grin MB, Johnson JC: Polyarteritis nodosa. Case report and review. Mo Med 81(10): 657–659, 1984.

24. Liddicoat JE, Bekassy SM, O'Donnell MJ, et al: Coronary artery aneurysms in a 9-year-old child. Surgery

76(5):845–847, 1974.

25. Meehan SE, Coghill SB, Cuschieri A: A case of childhood polyarteritis nodosa associated with cryofibrinogenaemia presenting in adulthood with massive gastrointestinal bleeding. Scott Med J 28(3):302–305, 1983.

26. Gerstenberg T, Nielsen ML, Lindenberg J, et al: Spontaneous non-aneurysmal rupture of the renal pedicle artery due to acute vasculitis in polyarteritis nodosa—with survival. Acta Chir Scand 144(7–8):549–551, 1978.

27. Almgren B, Eriksson I, Foucard T, et al: Multiple aneurysms of visceral arteries in a child with polyarteritis nodosa. J Pediatr Surg 15(3):347–348, 1980.

28. Bookman AA, Goode E, McLoughlin MJ, et al: Polyarteritis nodosa complicated by a ruptured intrahepatic aneurysm. Arthritis Rheum 26(1):106–108, 1983.

29. Li AK, Rhodes JM, Valentine AR: Spontaneous liver rupture in polyarteritis nodosa. Br J Surg 66(4):251–252, 1979.

30. Branski D, Gross V, Gross-Kieselstein E, et al: Pancreatitis as a complication of Henoch-Schönlein purpura. J Pediatr Gastroenterol Nutr 1(2):275–276, 1982.

31. Toskin KD: Syndrome of hemorrhagic pancreatitis as a manifestation of Schönlein-Henoch disease. Klinicheskaia Khirurgiia 11:65–67, 1965.

32. Garner JA: Acute pancreatitis as a complication of anaphylactoid (Henoch-Schönlein) purpura. Arch Dis Child 52(12):971–972, 1977.

33. Puppala AR, Cheng JC, Steinheber FU: Pancreatitis—a rare complication of Schönlein-Henoch purpura. Am J Gastroenterol 69(1):101–104, 1978.

34. Thorne JC, Bookman AA, Stevens H: A case of polyarteritis presenting as abrupt onset of pancreatic insufficiency, letter. J Rheumatol 7(4):583–586, 1980.

35. Bocanegra T, Vasey FB, Espinoza LR, et al: Pancreatic pseudocyst: a complication of necrotizing vaculitis (polyarteritis nodosa). Arch Intern Med 140(10):1359–1361, 1980.

36. Harvey MH, Neoptolemos JP, Fossard DP: Abdominal polyarteritis nodosa—a possible surgical pitfall? Br J Clin Pract 38(7–8):282–283, 1984.

37. Mohammed R: Acute appendicitis: a complication of Henoch-Schönlein purpura. J R Coll Surg Edinb 27(6):367, 1982.

Coming in September:

ONCOLOGY GUIDELINES REPORT

". . . a physician's perspective of a rapidly-changing field . . . pragmatic set of guidelines for busy physicians who need to make decisions regarding primary care, consultation, or referral . . . most current experience on optimal care for the cancers most frequently encountered . . ."

Developed by 87 cancer specialists from all regions of the state, working as part of the Legislative Task Force on Cancer in Texas.

Yours with *Texas Medicine*'s double issue in September.

Watch for it!

SEYMOUR FISHER, PhD
STEPHEN G. BRYANT, PharmD
BRENDA L. SOLOVITZ, DrPH
RONICA M. KLUGE, MD

Statewide test of a new postmarketing drug surveillance system

As a complement to existing physician-based postmarketing surveillance systems, a new approach to monitoring adverse drug reactions (ADRs) is described. This pharmacy-based, patient-initiated reporting system has been validated in a preliminary methodological study of 3,814 adult outpatients at The University of Texas Medical Branch, and is about to be field tested during the next five years in collaboration with more than 700 Eckerd, Revco, and Walgreen pharmacies in Texas. Despite a number of intrinsic limitations, it is hoped that this patient self-monitoring system can provide an effective alerting mechanism for detecting ADRs, with the additional advantage of possibly revealing unsuspected therapeutic benefits.

Seymour Fisher, PhD, Stephen G. Bryant, PharmD, and Brenda L. Solovitz, DrPH, Center for Medication Monitoring, Department of Psychiatry and Behavioral Sciences; Ronica M. Kluge, MD, Department of Internal Medicine, The University of Texas Medical Branch at Galveston. Reprint requests to Dr Fisher, Center for Medication Monitoring, D-41, The University of Texas Medical Branch, Galveston, TX 77550.

On Sept 1, 1987, Texas becomes an experimental laboratory for a definitive field test of a new approach to postmarketing surveillance of adverse drug reactions (ADRs). The US Food and Drug Administration (FDA) and the entire pharmaceutical industry will follow closely the results of this five-year research project in which three national pharmacy chains—Eckerd Drug Company, Revco D.S., Inc, and Walgreen Company—are collaborating with The University of Texas Medical Branch at Galveston (UTMB) in determining the sensitivity of a patient-initiated monitoring system, conceived as a complement to existing physician-initiated systems.

Existing approaches

Since 1960 the FDA has maintained a physician-initiated voluntary reporting system of suspected ADRs (1). At the heart of this general system is the FDA's Drug Experience Report (Form 1639a), on which all suspected adverse reactions from marketed drugs are required to be reported to the FDA by the drug manufacturer. Jones (2) states that the FDA receives 85% of its reports from manufacturers and 15% directly from physicians.

Rossi and Knapp (3) found this system to be somewhat inferior to physician case reports and letters to the editor published in the medical literature. A 1980 report by the Joint Commission on Prescription Drug Use (4) concluded that sole reliance on systems of voluntary reporting by physicians to manufacturers, journals, and government agencies is clearly unsatisfactory, and others (5,6) have noted that this is especially true for ambulatory patients, many of whom cannot be followed adequately after treatment has begun.

A number of different approaches to formal systems have been explored in the US and other countries (7–13). Most depend upon physician judgments in one form or another, including record-linkage methods such as utilization of Medicaid drug-event data (14) or data relating pharmacy prescriptions to hospital record information (15,16). In one evaluation of selected formal monitoring systems (17), manufacturer-initiated postmarketing studies failed to identify a number of significant new ADRs from two drugs later requiring labeling changes.

It is noteworthy that, although most suspected ADRs in ambulatory populations stem initially from patients' spontaneous reports to their physicians or to associated medical staff, there have been no previous attempts to develop any formal patient-initiated surveillance systems.

UTMB validation study

A preliminary validation study was conducted between September 1984 and April 1986 at two UTMB pharmacies. At the time a prescription for a targeted drug was filled, a printed notice was conspicuously attached to the medication bags of 2,705 outpatients. The information requested the patient to report any "new or unusual symptoms" during the next two weeks via a toll-free telephone number. Another 1,109 patients also having prescriptions filled for the same target drugs were randomly selected to help validate the new method. They did not receive any request for self-monitoring, but were interviewed by telephone two weeks later. The target drugs were chosen from two classes for which side-effect profiles are well identified: oral antibiotics and tricyclic antidepressants. All telephone interviews were tightly structured and conducted by a cadre of highly trained technicians who generally did not know whether the patient was taking an antibiotic or antidepressant until all possible side effects had been recorded. Details of the content and format of the interview have been reported elsewhere (18,19).

The major results (20) showed that the most commonly expected antibiotic and tricyclic ADRs were predictably elicited with high relative frequencies from the validation sample, and that within both drug classes all patient-initiated reports via the new method closely matched those obtained from the staff-initiated interviews with the validation sample. One additional analysis (21) revealed a previously unsuspected relationship between the incidence of gastrointestinal upset and the use of one particular antibiotic: Patients taking doxycycline had a three- to six-fold greater risk of experiencing nausea or vomiting than patients taking any of three other common antibiotics (tetracycline, ampicillin, and penicillin). Whether this marked increase was truly attributable to doxycycline per se or to other factors (for example, different types of patients for whom doxycycline was prescribed), the salient

point is that the relationship was detected from the self-monitoring sample with a degree of sensitivity comparable to that of the validation sample.

Thus, the validation study clearly showed that a pharmacy-based, patient-initiated monitoring system has the capability of detecting some kinds of ADRs. However, these were all well-known, relatively common ADRs, occurring within two weeks of starting drug treatment. It now becomes essential to see if—with appropriately large, diverse patient samples—the new method is equally capable of detecting unknown ADRs, either common or rare, with early or later onset.

Limitations and virtues

In searching for unsuspected ADRs using patient-initiated telephone reports, it is important to recognize that such a system necessarily has a number of intrinsic limitations:

1. The system focuses mainly on reports of symptoms (plus occasional signs) from ambulatory patients, and would only rarely yield true diagnoses or final objective outcomes. As a corollary, long-delayed insidious ADRs (eg, interstitial nephritis, endometrial cancer) may never be detected within the system, nor will any ADRs that are only detectable by a clinical laboratory procedure (examples are low sperm count or leukocytosis).

2. The system will tend to underdetect drug-induced hospital admissions that could go unreported by telephone because the period of hospitalization is extended or the patient is too seriously ill; additional periodic mail or telephone contact between the patients and the system staff is essential. Similarly, the system by itself is unlikely to detect many cases of drug-induced mortality and must be supplemented by death registry searches for patients with whom direct contact has been lost.

On the other hand, there are a number of potential advantages of a patient-initiated reporting system that warrant special emphasis:

1. The system is basically simple and efficient. Depending upon the number of collaborating pharmacies, it is possible to monitor large numbers of patients in a relatively short period of time. Yet even if 50,000 or more patients are enrolled in a study, only a relatively small percentage will be expected to require a full standardized interview.

2. By including a comparison (standard) drug for monitoring along with a target (new) drug, the system has the potential for partial ADR confirmation or disconfirmation, as opposed to the mere reporting of symptoms associated with target drug use. Much has been written about the difficulties of inferring drug causality from uncontrolled observations of adverse clinical events (22–25). When ethical and practical considerations in postmarketing surveillance preclude stopping and starting a drug repeatedly in individual patients (ie, after drug discontinuation, instituting challenge and dechallenge tests), the need for some kind of concurrent comparison group is so compelling that we have recommended (19,26) a method of approximate controls—similar to Inman's approach in England (8)—that should be included routinely in every postmarketing surveillance study. The aim here is to select for comparison a group of patients with illnesses as similar as possible to those for whom the new drug is indicated, but who are receiving an older standard drug. While this method cannot give assurance that any observed incidence differences must be attributed to the target drug, it does help markedly to reduce the influence of numerous confounding factors unrelated to the new drug. Depending on how comparable the standard and new drug patients are assumed to be, disconfirmation is suggested when unusual or high-frequency reactions reported by the target drug group are also observed with equal frequency in the control (standard drug) group, thereby reducing the number of false positives attributed to the new drug.* A significantly greater relative frequency of any particular symptom reported in the new drug group would not only serve an alerting function, but also convey a greater or lesser probability of target drug attribution. Similarly, an observed incidence of an adverse reaction in the new drug group that is significantly *lower* than that observed in the standard drug group suggests a genuine therapeutic advantage for the new drug.

3. As an extension of the previous point, patient-initiated reporting need not be limited to adverse reactions. By including in the patient instructions a request for reports of any unusual health *benefits* as well as adverse events, the system has the potential to uncover unsuspected therapeutic indications for the target drug. This may be an extremely important virtue since at present, once a drug has been marketed, only serendipity determines if and when a new benefit will be discovered. Strom and associates (27) have recently presented a persuasive argument in favor of more intensive and systematic monitoring of drug benefits, noting that "a large proportion of common drug uses had not been approved by the FDA at the time of marketing."

*It must be recognized, however, that if the incidence of a particular adverse reaction in the new drug group does not differ from the standard drug group incidence, this does not imply that the reaction is not a genuine drug-induced adverse reaction; it only means that, relative to the standard drug used for comparison, the reaction cannot be considered a new or higher-incidence ADR (ie, it could be an ADR equally common to both drugs).

Present study

With the cooperation of more than 700 Texas pharmacies, adult patients filling a new prescription for a targeted drug are being asked to participate for a three-month period in this self-monitoring research project. At any given time, there will always be at least two target drugs being monitored: one or more recently approved new drugs and a standard drug. The information given to the patient on the written consent form when entering the study points out that the project is designed to learn more about how often side effects of medicines may occur, and then emphasizes: "The medicines prescribed by your physician have been proved to be safe and effective. Your doctor believes that they are best for you. *There is no reason to believe that your medicines will cause you any special problems,* although all prescription drugs may occasionally cause unwanted side effects in some patients." Attached to the patient's copy of the consent form is an 8 x 13 cm removable sticker, summarizing what is expected of the patient (Fig 1).

The project's goal is to monitor at least 10,000 patients who are being treated with any particular target drug. This is a minimally desirable cohort size to detect relatively rare events (28–30).

Data collection

When a telephone call is received from a patient, a standardized interview is conducted to record the reports of possible side effects or unexpected benefits. The interview is computer-assisted so that the questions appearing on the interviewer's video screen are almost completely determined by the patient's prior response. A typical interview with a first-time caller takes approximately 15 minutes; repeat calls are generally shorter.

Our technicians are careful not to offer advice to patients about any reported symptoms or related questions. At the conclusion of each telephone interview, a computer-generated summary of the information obtained from the patient is mailed to the prescribing physician.

In addition to the patient-initiated telephone reports, very brief questionnaires are mailed at 2 and 12 weeks to *all* patients entered in the study. There are two important reasons for the questionnaires. First, we need certain basic information (eg, demographic data, whether the patient started the target drug, concomitant medications, previous use of target drug) on those patients who do not telephone us. Second, rigorous postmarketing surveillance demands that all patients in a cohort be accounted for, since a patient may have become lost to the study precisely because of one or more serious ADRs. Therefore, if a questionnaire is not returned within a reasonable time period, we make every effort to track down the patient. First, we attempt to reach the patient by phone; if unsuccessful, we attempt to contact the patient's relative or friend (whose telephone number was provided on the consent form). If this fails, we telephone the prescribing physician's office for any possible new information. And finally, if necessary, we search death records from the Texas Department of Health and the US Social Security Administration.

Data analyses

Each event reported by a patient (or obtained from external sources) is scanned by the computer to compare the accumulated relative frequency in patients receiving a new drug and the standard drug. Whenever a difference is detected at some predefined significance level, the computer signals an alert. The threshold level for defining a difference depends, in part, on the nature of the report: *any* potentially serious adverse event identified in a new drug group is immediately flagged for comparison with the standard drug group (eg, vomiting of blood, seizures, yellowing of eyes or skin, loss of consciousness, sudden numbness). For less serious symptoms or possible benefits, whenever four or more reports of a single event accumulate in any drug group, an alert is initially signaled if the incidence estimates are different at less than a .20 probability level. Once an event has been signaled, changes in the significance levels are followed weekly over the entire project period.

Throughout the five-year period of the Texas field test, we will be examining the concordance between possible ADRs or unexpected benefits identified by the patient-initiated method with similar data obtained from physician reports to the FDA, drug manufacturers, and medical journals.

Comments

It is clear that a comprehensive postmarketing surveillance system requires the development and application of multiple complementary methods.

Center for Medication Monitoring
The University of Texas Medical Branch
Galveston, Texas 77550
In Texas call: **1-800-000-0000**
Outside of Texas, call collect: **0-409-000-0000**
Monday–Friday (except holidays) 9:00 A.M.–8:00 P.M.
Saturday (except holidays) 9:00 A.M.–1:00 P.M.

During the next three months, please telephone us toll-free to report **any** possible side effects or unexpected benefits from your medication.

It is important for you to phone us whenever you notice any unusual symptoms or benefits during this period. Call us:

- even if you don't know whether the symptoms or benefits are caused by your medicines
- even if the symptoms are somewhat difficult to talk about
- even if you've already spoken with your doctor about the symptoms
- even if you've stopped taking your medicine

Phone numbers were not available at press time.

1. Removable sticker from consent form summarizing instructions to patients.

Physician-initiated monitoring components will always be essential, but there is considerable room for innovative approaches. Our hope is that, despite some obvious limitations, a pharmacy-based, patient-initiated postmarketing system can serve as a sensitive alerting mechanism for both adverse and beneficial drug effects. The results from this current statewide research project should reveal whether patient self-monitoring offers a promising complement to existing physician-based systems.

REFERENCES

1. Faich GA: Adverse-drug-reaction monitoring. N Engl J Med 314(24):1589–1592, 1986.
2. Jones JK: Regulatory use of adverse drug reactions, in Bostrom H, Ljungstedt N (eds): Detection and Prevention of Adverse Drug Reactions. Stockholm, Almqvist and Wiksell, 1983, pp 203–216.
3. Rossi AC, Knapp DE: Discovery of new adverse drug reactions. A review of the Food and Drug Administration's spontaneous reporting system. JAMA 252(8):1030–1033, 1984.
4. Joint Commission on Prescription Drug Use. Report of Joint Commission on Prescription Drug Use. Rockville, Md, 1980.
5. Velo GP, Giampaolo P, Wardell WM: NATO Advanced Study Institute on Drug Development, Regulatory Assessment, and Postmarketing Surveillance, in Wardell WM, Velo GP (eds): Drug Development, Regulatory Assessment, and Postmarketing Surveillance. New York, Plenum Press, 1981.
6. Karch FE, Lasagna L: Adverse drug reactions in the United States. An analysis of the scope of the problem and recommendations for the future approaches. Washington, Medicine in the Public Interest, 1974.
7. Jick H: Use of automated data bases to study drug effects after marketing. Pharmacotherapy 5(5):278–279, 1985.
8. Inman WH: Prescription-event monitoring. A preliminary study of benoxaprofen and fenbufen. Acta Med Scand 683(Suppl):119–126, 1984.
9. Bridgman KM, Carr M, Tattersall AB: Post-marketing surveillance of the transiderm-Nitro patch in general practice. J Int Med Res 12(1):40–45, 1984.
10. Borden EK, Lee JG: A methodologic study of post-marketing drug evaluation using a pharmacy-based approach. J Chronic Dis 35(10):803–816, 1982.
11. Emanueli A, Born A, Lavezzari M: A study on the treatment of arterial hypertension with atenolol/chlorthalidone tablets: preliminary results of a post-marketing surveillance clinical trial on 2449 patients. J Int Med Res 12(5):314–320, 1984.
12. Maclay WP, Crowder D, Spiro S, et al: Postmarketing surveillance: practical experience with ketotifen. Br Med J (Clin Res) 288(6421):911–914, 1984.
13. Humphries TJ, Myerson RM, Gifford LM, et al: A unique postmarket outpatient surveillance program of cimetidine: report on phase II and final summary. Am J Gastroenterol 79(8):593–596, 1984.
14. Jones JK, Van de Carr SW, Rosa F, et al: Medicaid drug-event data: an emerging tool for evaluation of drug risk. Acta Med Scand 683(Suppl):127–134, 1984.
15. Crombie IK, Brown SV, Hamley JG: Postmarketing drug surveillance by record linkage in Tayside. J Epidemiol Community Health 38(3):226–231, 1984.
16. Jick H, Madsen S, Nudelman PM, et al: Postmarketing follow-up at Group Health Cooperative of Puget Sound. Pharmacotherapy 4(2):99–100, 1984.
17. Rossi AC, Knapp DE, Anello C, et al: Discovery of adverse drug reactions. A comparison of selected phase IV studies with spontaneous reporting methods. JAMA 249(16):2226–2228, 1983.
18. Fisher S, Bryant SG, Kluge RM: New approaches to postmarketing surveillance. Psychopharmacology (Berlin) 90(3):347–350, 1986.
19. Fisher S, Bryant SG, Kluge RM: Detecting adverse drug reactions in postmarketing surveillance: interview validity. In press.
20. Fisher S, Bryant SG, Solovitz BL, et al: Patient-initiated postmarketing surveillance: a validation study. In press.
21. Bryant SG, Fisher S, Kluge RM: Increased side effects associated with doxycycline use. In press.
22. Lasagna L: Postmarketing surveillance of drugs. Washington, Medicine in the Public Interest, 1977.
23. Louik C, Lacouture PG, Mitchell AA, et al: A study of adverse reaction algorithms in a drug surveillance program. Clin Pharmacol Ther 38(2):183–187, 1985.
24. Wardell WM, Tsianco MC, Anavekar SN, et al: Postmarketing surveillance of new drugs: I. Review of objectives and methodology. J Clin Pharmacol 19(2–3):85–94, 1979.
25. Venulet J, Berneker G, Ciucci AG: Assessing causes of adverse drug reactions. New York, Academic Press, 1982.
26. Fisher S: Postmarketing surveillance of adverse drug reactions, in Meltzer HY (ed): Neuropsychopharmacology: The Third Generation of Progress. New York, Raven Press, 1987.
27. Strom BL, Melmon KL, Miettinen OS: Postmarketing studies of drug efficacy, editorial. Arch Intern Med 145(10):1791–1794, 1985.
28. Feinstein AR: Clinical biostatistics. 28. The biostatistical problems of pharmaceutical surveillance. Clin Pharmacol Ther 16(1):110–123, 1974.
29. Castle WM, Nicholls JT, Downie CC: Problems of post-marketing surveillance. Br J Clin Pharmacol 16(6):581–585, 1983.
30. Lasagna L: Discovering adverse drug reactions, editorial. JAMA 249(16):2224–2225, 1983.

ACKNOWLEDGMENT

This project is currently supported by grants from the US Public Health Service and the Hogg Foundation for Mental Health.

ROBERT E. ROUSH, EdD, MPH
WILLIAM A. THOMSON, PhD
PETER L. ANDRUS, MD

Implications of allied health and nursing students' knowledge of cancer prevention

A survey instrument was developed to measure knowledge of cancer epidemiology and to determine cancer prevention attitudes held by various groups of health professions students. The students surveyed were junior- and senior-level allied health, nursing, and education students. Findings suggested that students enrolled in health professions training programs were similar to their counterparts in other areas of study in possessing many misconceptions about the incidence of cancer and the potential for cancer prevention. Furthermore, with regard to their knowledge of accurate cancer information, physicians' office staff may not differ markedly from the patients they treat. Thus, the possible implications of this study for clinicians and health professions educators focus on physician behavior. By serving as a role model and providing requisite information and training for the remainder of the health care team, physicians can change the knowledge and behavior of their staffs and patients.

The basic premises of this article are that physicians and associated health professionals should be current in their knowledge of research on oncogenesis and of cancer epidemiology, that the health care team should hold a common body of cancer knowledge, and that physicians and their allied health and nursing personnel should maintain a multidimensional view of prevention based on the natural history of disease concept (1).

Pursuant to a contract from the National Cancer Institute, a course on cancer prevention for physician assistants (PA) was developed, implemented, and evaluated at Baylor College of Medicine (2). One of the objectives of the contract was to assess PA students' attitudes toward cancer prevention including early detection, treatment, and rehabilitation. A survey instrument, The Professionals' Attitudes Toward Cancer Scale (PACS), was developed and extensively field-tested to examine not only PA students' attitudes regarding cancer prevention, but also those of other nonphysician health professions students.

This article reports our findings in administering the PACS to several groups of undergraduate students in both health and non-health related programs. The educational implications of our findings should be of interest to oncologists and other clinicians who employ and/or work with allied health and nursing professionals.

Theory and methods

Although many studies have focused on identifying health professionals' attitudes, few have focused specifically on cancer (3). Haley et al found that medical students' attitudes concerning cancer tend to cluster around four dimensions: patients' inner resources to cope with cancer, early diagnosis, aggressive treatment, and attitudes toward life and death. Changes in these attitudinal dimensions during medical school were found to be affected more by education and clinical learning experiences than by students' basic personality characteristics (4). In addition, Hutchinson's model of prevention helped to provide a theoretical framework for the construction of the PACS instrument (5). Items for the PACS were designed to measure each subject's knowledge and attitudes regarding primary (health promotion, information-giving activities), secondary (early detection and treatment), and tertiary (rehabilitative and psychological support needs of the cancer patient) levels of prevention. Opportunities for preventing cancer are greatest through the elimination of certain known risk factors, primarily those related to diet, tobacco use, and other life-style behaviors (6). Thus, education for both health professionals and their patients should play a significant role in any cancer prevention program (7).

The PACS contains 93 items measuring attitudes, general knowledge of cancer, and individual lifestyle characteristics. PACS items were drawn from previously used survey instruments (4,8). The items were rewritten by test construction specialists and their content was validated by 15 Baylor physician specialists in oncology and preventive medicine. Reliability coefficients for the PACS items were established using groups of junior- and senior-level baccalaureate level students including 53 PA students in another nearby medical school, 82 teacher education students at a local major state university, 146 nursing students at two local university-based nursing programs, and 64 allied health students representing four professional fields from a local health science center. Alpha reliability coefficients* computed on a 0 to ±1 scale were as follows: primary prevention subscale, 0.67; secondary prevention subscale, 0.69; tertiary prevention subscale, 0.60; American Cancer Society subscale, 0.62; and total instrument, 0.77. Finally, PACS was incorporated as part of a 12-module cancer prevention course taken by 50 Baylor PA students (11).

Results

The responses gathered from the three student groups—allied health (AH), nursing (RN), and education (ED)—were examined using a chi-square test to determine whether their frequency of responses on an agree/neutral/disagree scale differed

*Alpha is perhaps the most widely used reliability coefficient (9). Cronbach's alpha tells how well scores obtained by testing under just one condition represent universe scores (10).

Robert E. Roush, EdD, MPH; William A. Thomson, PhD; and Peter L. Andrus, MD; Center for Allied Health Professions and Department of Community Medicine, Baylor College of Medicine, Houston, Texas. Send reprint requests to Dr Roush, Room 134A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

statistically. This examination revealed that the groups differed at the .05 level of significance on the following five items: on the statement, "The causes of cancer are unknown," significantly more RN students (62%) agreed than did AH (40%) and ED (42%) students; on the statement, "Stress can cause cancer," 34% of ED students agreed compared to 63% and 67% of AH and RN students, respectively; on the statement, "Regular physical exercise helps to prevent cancer," higher levels of AH (80%) and ED (76%) students agreed compared to 50% of RN students; on the statement, "Proper dietary habits are important in preventing cancer," significantly more AH students (83%) agreed than did RN (60%) and ED (62%) students; and on the statement, "Therapeutic attempts to control a cancer's progress should continue for as long as the patient can be kept alive," 48% of ED students agreed while only 25% and 30% of AH and RN students agreed, respectively. No statistically significant differences between student groups were found on any of the other 88 items of the PACS.

Few differences were seen between the cancer-related attitudes of the three groups of students measured by the PACS and those of the general public measured by an ACS study (8). For example, comparing students and the ACS subjects on the question, "How many people will get cancer?" 17% of AH and 20% of RN students answered correctly, whereas 27% of ED students and 24% of ACS subjects knew the correct answer was one out of four. Only 15% of the students and 12% of the ACS subjects correctly estimated that 1 out of 27 is the probability of men developing lung cancer. Another similarity between the students (59%) and the ACS subjects (54%) was their expression of fearfulness about developing cancer.

Our analysis of the PACS data suggests that future health professionals hold many misconceptions regarding cancer, its incidence, and its prevention: These misconceptions are also held by non-health professions students. Additional analyses of the data revealed interesting comparisons between health professions students' answers to certain items with those of the general public.

Discussion

The significance of differences and similarities between the three groups of students studied may be of less importance than the general conclusion that health professions students in this study were not markedly different from their counterparts in the general population. Presumably, both health professionals and the general public would benefit from improved knowledge and more appropriate attitudes regarding cancer prevention and treatment. The health status of Americans might improve if patients held knowledge and exhibited attitudes nearer the levels possessed by well trained health professionals. Such congruence might result in better communication between patients and professionals, leading to greater adherence to preventive strategies and more appropriate utilization of health professionals by the public.

The implications of this study for health professions educators and clinicians devolve on physician behavior. According to Haley, "The most important factor in clinical attitude development may be faculty behavior in care of patients. If medical students are to be accurate, thorough, and persistent in their diagnostic approach, they should be instructed by faculty members who practice in this manner. Similarly, if treatment of cancer is to be aggressive, students should see positive patient outcomes from aggressive treatment (4). To the degree that the relationship between clinicians and their non-physician staffs is similar to that between medical school clinical faculty and medical students, physicians should take the opportunity to "teach" beneficial cancer prevention knowledge and attitudes to their office staffs.

A compelling reason for the need to have health professionals attempt behavior-modifying efforts for their patients is implied in the statement by ACS President Robert J. McKenna, MD, that 1985 may prove to be the first year in US history in which more women died of lung cancer than of any other form of cancer (12).

In conclusion, if more physicians held positive attitudes toward aggressive cancer prevention activities and if their actions engendered equally positive attitudes among their allied health and nursing staffs, improved patient care could result. That attempts to achieve this would be worth the effort is evident in the findings of the recent ACS incidence estimates: of the 472,000 Americans (24,000 in Texas alone) estimated to die from cancer in 1986, about 164,000 might have been saved by earlier diagnosis and prompt treatment; and about 375,000 Americans, or four of ten whose cancers were detected in 1986, will be alive five years after diagnosis (13). Saving this many lives through primary and secondary prevention is the responsibility of all—physicians, other health care providers, and patients. Thus, we must have both accurate information and an attitude that predisposes us to take appropriate action.

REFERENCES

1. Clark EG, Leavell HR: Levels of application of preventive medicine, in Leavell HR, Clark EG (eds): Preventive Medicine for the Doctor in His Community: An Epidemiologic Approach, ed 2. New York, Blakiston Division, 1958.

2. Roush RE, Thomson WA, Fasser CE: A Course on Cancer Prevention for Physician Assistants. Courses in Cancer Prevention (NIH Publication No. 84–2497:15–16).

Washington, DC, US Government Printing Office, Oct 1983.

3. Rezler AG: Attitude changes during medical school: a review of the literature. J Med Educ 49:1023–1030, 1974.

4. Haley HB, Huynh H, Paiva RE, et al: Students' attitudes toward cancer: changes in medical school. J Med Educ 52:500–507, 1977.

5. Hutchison GB: Evaluation of preventive services. J Chron Dis 11:497–508, 1960.

6. Doll R, Peto R: The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today. JNCI 66:1191–1308, 1981.

7. Iverson DC, Scheer JK: School-based cancer education programs: an opportunity to affect the national cancer problem. Health Values 6(3):27–34, 1982.

8. Public attitudes toward cancer and cancer tests. CA 30(2):92–98, 1980.

9. Hull CH, Nie NH: SPSS Update. New York, McGraw-Hill, 1979.

10. Cronbach LJ: Essentials of psychological testing, ed 3. New York, Harper and Row, 1970.

11. Roush RE, Thomson WA: An educational paradigm for developing a course on cancer prevention for health professions educators. J Studies Tech Careers 6(2):112–121, 1984.

12. Gunby P: Seeking to end smoking's appeal to women, youth, news. JAMA 253(20):2943–2944, 1985.

13. 1986 Cancer Facts and Figures. American Cancer Society, New York, 1986.

ACKNOWLEDGMENT

The study reported in this article was supported by contract no. 1-CN-95479 from the National Cancer Institute. The opinions expressed in this paper are those of the authors and not necessarily those of the National Cancer Institute.

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Gene rearrangements in lymphoma. Applications to dermatopathology. Philip E. LeBoit, MD, and Tristam G. Parslow, MD, PhD. Masson Publishing USA, Inc, *American Journal of Dermatopathology,* vol 9, no 3, 1987, pp 212–218.

Clonality is regarded as an important diagnostic feature of B-cell lymphomas, but until recently the clonality of T-cell proliferations could not be directly determined. Elucidation of the genetic events in lymphocytic differentiation has led to the development of an assay for clonality in both B- and T-cell infiltrates. Clonal rearrangement of the immunoglobulin or T-cell receptor genes can be detected by the Southern blot technique. Such rearrangements provide evidence of clonal proliferation, which, in the proper context, can be regarded as a sign of malignancy. The presence of gene rearrangements in poorly differentiated neoplasms may serve as evidence of hematopoietic differentiation, and the pattern of such rearrangements may point to either T- or B-cell lineage. Specific applications to dermatopathology include the evaluation of skin biopsy specimens for cutaneous lymphoma, evaluation of peripheral blood specimens for detection of Sézary's syndrome, and evaluation of lymph nodes and blood for the staging of mycosis fungoides.

Simultaneous in vitro fertilization and gamete intrafallopian transfer (GIFT). Martin M. Quigley, MD, Joseph E. Sokoloski, BS, Donna M. Withers, BA, et al. American Fertility Society, *Fertility and Sterility,* vol 47, May 1987, pp 797–801.

During a six-month period, a combination of gamete intrafallopian transfer (GIFT) and in vitro fertilization (IVF) was offered to all couples beginning an IVF treatment cycle in whom the wife had anatomically normal fallopian tubes. It was recommended to these couples that sufficient oocytes be reserved for insemination in vitro to determine whether the husband's spermatozoa could fertilize the wife's oocytes. During this interval, 16 couples underwent the combined IVF-GIFT procedure. All of the IVF-GIFT couples had at least two oocytes inseminated in vitro and at least two oocytes for GIFT. Of the 16 IVF-GIFT couples, only 1 (6.25%) achieved a clinical pregnancy. More important, 50% (8 of 16) of the IVF-GIFT couples had no oocytes fertilized in vitro. With the information concerning lack of fertilization in vitro, appropriate recommendations concerning future fertility management can be made. If the same couples had undergone the GIFT procedure alone, without additional oocytes fertilized in vitro, this information would not have been obtained.

Thrombotic thrombocytopenic purpura: treatment with plasmapheresis. Jonathan B. Blitzer, James M. Granfortuna, Arlan J. Gottlieb, et al. Alan R. Liss, Inc, *American Journal of Hematology,* vol 24, 1987, pp 329–339.

Twenty-one episodes of thrombotic thrombocytopenic purpura (TTP) were treated with plasmapheresis. Adjunctive agents included corticosteroids, aspirin, dipyridamole, and vincristine. There were 17 patients; 12 were female. The median age was 41 years. Most patients presented with neurologic symptoms. Thrombocytopenia was profound with a mean initial platelet count of 14,900/mm^3. The mean hematocrit on presentation was 26.7% and the mean LDH 1,300 IU/L. Eighteen episodes responded completely following plasmapheresis/plasma exchange (86%). Response was prompt, the initial rise in platelet count occurred after a mean of four exchanges, and complete response (a platelet count over 150,000/mm^3) was obtained after a mean of nine exchanges. Four of the episodes treated were relapses that occurred in three patients. All responders are alive with a median duration of follow-up of 20 months. The three patients who failed to respond have died. This report extends recent observations that the addition of plasmapheresis/plasma exchange to the therapy of TTP has significantly improved the outlook for patients with this disorder.

Expression of human immunodeficiency virus in cerebrospinal fluid of children with progressive encephalopathy. Leon G. Epstein, MD; Jaap Goudsmit, MD, PhD; Deborah A. Paul, PhD, et al. Little, Brown and Company, *Annals of Neurology,* vol 21, 1987, pp 397–401.

The retrovirus that causes acquired immune deficiency syndrome (AIDS) is now designated the human immunodeficiency virus (HIV). The cerebrospinal fluid (CSF) of 27 children with HIV infection was assayed for intrablood-brain barrier (IBBB) synthesis of HIV-specific antibodies and for the presence of HIV antigen. In this cohort, 11 children had a progressive encephalopathy (PE), 9 had a static encephalopathy (SE), and 7 had normal neurological findings. IBBB synthesis of HIV-specific antibodies was identified (using matched serum and CSF specimens) in 7 of 11 children with PE, 4 of 9 children with SE, and 2 of 7 children with normal neurological findings. HIV antigen was found (using a highly sensitive solid-phase enzyme immunoassay) in the CSF of 8 of 11 children with PE, none of the children with SE, and none of the 7 children with normal neurological findings. On the basis-of these data, the authors conclude that (1) IBBB synthesis of HIV antibodies indicates invasion of the central nervous system but may reflect prior or current infection; and (2) HIV antigen in CSF indicates viral expression and correlates with the occurrence of PE. These findings strongly implicate HIV as the causative agent of PE in these children. The assay for HIV antigen in the CSF may be of value in determining the prognosis of children with HIV infection and for evaluating the efficacy of therapeutic agents against this retrovirus.

AIM HIGH

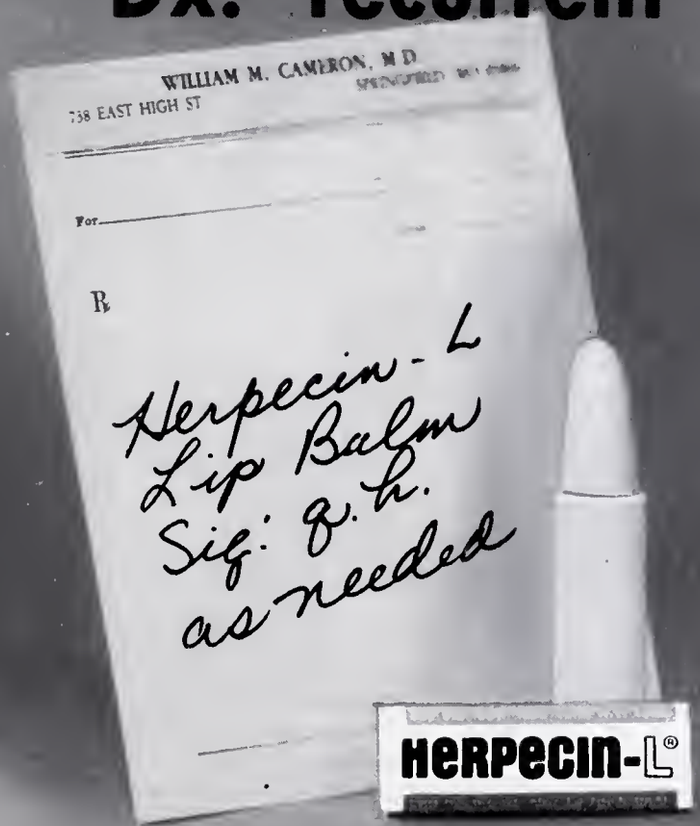
PHYSICIAN SPECIALISTS.

The Air Force can make you an attractive offer—outstanding compensation, better working hours plus opportunities for professional development. You can have a challenging practice and time to spend with your family. Find out what the Air Force offers a specialist up to age 58. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 784-3132 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for Information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

Saragosa: The medical response

Area meteorologist Andy Anderson describes the tornado that swept through the tiny West Texas community of Saragosa the evening of May 22 as "chaotic." His technical description of the tornado also applies to its physical and emotional aftermath. The chaos spilled into the halls, waiting areas, even the cafeteria of the Reeves County Hospital, where victims of the natural disaster sought medical assistance. In the midst of this chaotic scene, the hospital set its disaster response plan into action, establishing a measure of order, and cared for the injured. Months later, care continues.

This article describes the medical response to the tornado that night and the ongoing care of survivors.

Saragosa is an unincorporated town in West Texas' Reeves County, a major "western" tourist area. Before a tornado that claimed 30 of its citizens, the community had 350 residents. With a total of six physicians, Reeves County is one of the state's primary care health manpower shortage areas, as defined by the Texas Department of Health.

On the evening of May 22, nature's fury, in the form of a destructive and deadly tornado, visited Saragosa. It touched down about a mile southwest of the town and proceeded directly through its heart. Meteorologist Andy Anderson of the National Weather Service Forecast Office in Lubbock classifies the tornado at F-4 on a scale of zero to six, with six being "an incredibly destructive tornado that probably would take a well-built home right down to its slab foundation with nothing left," not even debris. He adds, "The estimated wind speeds on an F-4 tornado run from about 207 to 260 miles an hour . . . . The tornado in Saragosa also was a multiple-vortex tornado. Instead of being the single funnel that you often see pictured, which is very organized, with smooth sides, this is a more chaotic tornado with two to three vortices rotating around at the same time. It generally is the more destructive type of tornado. It looked like the path length was probably about three miles and the width probably was about a half mile."

As the tornado moved through the community, it killed 30 people and injured 120. According to Mr Anderson, these are the first tornado-related deaths in the county since record-keeping began in 1916. The injured and dying traveled 30 miles north to the Reeves County Hospital, a 62-bed facility in the county seat of Pecos, seeking help. Patients began to arrive at the hospital about 8:30 pm and they kept coming. The hospital staff was administering emergency care until about 3 am the next morning.

"Every hallway was full of patient beds, our classroom, our cafeteria, the laboratory, x-ray, physical therapy," hospital spokesman Nancy Bitolas said. The doctors' lounge became a temporary morgue.

Ms Bitolas added, "We had to ask visitors or anyone who did not absolutely have to be in the hospital to please go outside. So, our front lawn was packed. And, most of the people were peering in through the windows, trying to see if their relatives were in here. We had to have police officers help us control the traffic. The officers roped off the area in front and the entrances so we didn't have people coming in from every direction.

"Well over 100" news media representatives from throughout the United States—including Washington, New York, Los Angeles, and Florida-were part of the crowd.

Physicians from nearby towns joined three of the Pecos physicians who regularly staff the hospital to care for the injured. Won-Joo Bang, MD, a surgeon who has practiced in Pecos for 13 years, described the hospital scene as "amazing, just like a battlefield. People came in completely covered by mud and blood. The worst ones were head injuries. Many had shrapnel-type injuries. Some of them came in with a piece of broken wood penetrating the arm. Some of it was just devastating. Loose nails were like slugs that somebody shot."

Family physician Jen M. Chuong, MD, who has practiced in Pecos 14 years, added that some patients had problems with breathing as a result of the flying sand and mud. One Saragosa family lost six members in the tornado, he said.

Both Dr Bang and Dr Chuong felt that the hospital's disaster response plan was effective. Even though it was developed for a lesser-scale calamity, it provided a framework for action. Dr Bang noted that nearby hospitals responded when supplies started dwindling and the physicians who came to help brought supplies with them. He added, "Two doctors came from Monahans, and I think it was six doctors came from Odessa. They were a great help. I don't know how we

An auxiliary member provides information to tornado survivors in the hospital tobby. Policemen were on hand to help control crowds.

Reeves County Hospital personnel wheel a patient into the emergency room following a tornado that destroyed most of nearby Saragosa.

could have finished it without those doctors."

Following the tornado, 93 victims sought assistance at the hospital. According to assistant hospital administrator Iris Rives, "As a small hospital, our disaster preparations have been geared for influxes of patients in the range of 10 to 15 at one time. The Saragosa tornado disaster taxed the resources and personnel of Reeves County Hospital. Without the dedication and flexibility of the RCH staff, the quick and invaluable assistance from area hospitals (in the form of supplies and physician and nursing personnel), and the numerous community volunteers who were willing to do anything asked of them, we would not have been able to treat and to care for the large number of injured we saw that night. 'Teamwork by all' is the best way to describe how we were able to help the victims of the Saragosa tornado."

Further evaluation of the evening shows that the hospital dispensed a number of services and supplies that were not billed to patients. The total for x-rays, linen, pharmacy, laboratory, respiratory therapy, purchasing, and emergency room supplies comes to more than $19,000. Ms Bitolas recalls that as patients came in with their clothing "ripped to shreds," hospital personnel "were giving them sheets and pajamas and blankets to go home with . . . There were many expenses."

Drs Chuong and Bang also set aside accounting concerns. "That night we took care of people," Dr Chuong said.

Continuing care

The broken bones have been patched and the dead have been buried, but the need for care continues. Robert Dobyns, MD, an Austin child psychiatrist, has joined the efforts to help the tornado survivors cope with the emotional aftermath. Dr Dobyns recognized the need for intervention as the townspeople face the loss of friends and family members. Having grown up in the area, he felt drawn to contribute.

Dr Dobyns believes that his ties to the area have allowed him entrance that would not be available to an "outsider." He took the initiative because victims of disaster are not likely to ask for help. "People in disasters are routinely somewhat in shock," he said. "They walk around wondering what to do next. And, the last thing they're worrying about is mental health. They're worrying about keeping the rain off their heads, and that's understandable." Teresa Gonzales, a coordinator with the Reeves County Mental Health Center, agrees that the "coming down period has not happened yet."

Dr Dobyns observed that there are "very interesting dynamics" in the community since the disaster. The primary and overwhelming aftermath is the sense of loss. Noting the close-knit nature of the community, Dr Dobyns pointed out that many of the survivors are experiencing a deep sense of grief. "What they thrive on and what allows them to have meaning to their life is each other. And, what is most precious to them has been just taken away. So, everybody in that community has a great sense of loss." They are, he said, experiencing identifiable stages of grief: denial, anger, bargaining, and depression. Add to those the problems of survivors who are experiencing guilt, and "nonvictims" who may have become the subject of anger because they did not have so great a loss as others. He adds, post-traumatic syndrome in children may be observed as regressive behaviors.

Dr Dobyns has joined forces with the Catholic Church in the area to help train lay ministers who can help the community heal from the inside out. These key community leaders will lead support groups, and be taught how to help them through their grief and recovery. People who need more attention will be referred for individual counseling. During a visit to Saragosa in late June, Dr Dobyns found that community leaders also were in need of assistance in the face of expectation that they "had all the answers."

Dr Dobyns has made a long-term commitment to helping restore mental health in Saragosa. "People need to be aware of this for the next 10 to 15 years," he says. "There is going to be a school of thought that says I'm making a mountain out of a molehill. . . . People who play like it never happened will pay a terrible price . . . . We need to pay attention when we go through severe trauma. Just pay attention to ourselves and make sure we get what we need so we don't get to a state of crisis."

DONNA B. JONES
News Editor, *Texas Medicine*

Enhance your patient communications through use of the

TEXAS MEDICAL ASSOCIATION

HealthWise Series

A collection of health education brochures

The TMA HealthWise Series is a collection of 15 brochures on a variety of health topics. Each is designed to provide your patients valuable information and positively influence their health care habits. The collection is easy to read and can be used as reception area reading material or as statement stuffers.
Each brochure costs only 4¢ including sales tax, postage and handling.
Here's a brief description of each one:

Tobacco Products: Hazards You Could Live Without discusses the dangers of smoking and using tobacco products, and offers some suggestions for quitting.

Give Blood . . . So Others Can Live! answers questions about blood donations, including how to donate for others and yourself.

The Challenge of Medicine: Becoming a Physician describes the qualities and training necessary to become a physician, and discusses the range of health careers available.

Accidents—They Don't Just Happen describes the ways people can avoid accidents at home, work, and at play.

Health Fraud: The Voice of Misinformation focuses on proven versus unproven methods of treatment, the need for appropriate treatment of chronic illnesses, and what you can do if a treatment is suspect.

Immunizations—Investing in a Healthy Future provides an overview of the value and effectiveness of immunizations for both children and adults.

Putting Together the Health Care Puzzle describes the various ways you can receive health care including solo and group practices, HMOs, PPOs, IPAs, and ambulatory centers.

Your Health is in Your Hands discusses how health is ultimately the responsibility of the individual and how six health habits can contribute to a longer, healthier life.

Drunken Driving: Everyone's Problem describes the problem of drinking and driving and what you can do to help get the drunk driver off the road.

You and Your Doctor: Partners in Health Care emphasizes the need for good communication between the doctor and patient in achieving effective, cost-efficient health care.

Love Sick: Sexually Transmitted Diseases answers the most frequently asked questions about sexually transmitted diseases and tells how to prevent and deal with these diseases.

Click—the Sound of Saving a Life discusses the value and effectiveness of using auto safety belts and child restraints and answers some of the most frequently asked questions about these devices.

Feeling Good Means Being Health-Wise emphasizes the importance of feeling good physically, mentally, and emotionally and suggests ways to reduce risks to overall health.

Aging in Good Health tells the reader how to prevent accidents and illnesses and describes special needs of the older individual.

Good Health—Does It have to Cost a Lot? describes the factors that contribute to health care costs, what you can do to lower costs, and what physicians and businesses are doing in this area.

To place an order or to receive a free sample set of the 15 brochures, contact the Communication Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704.

Immigration Reform and Control Act of 1986

To help control illegal immigration, the Immigration Reform and Control Act of 1986 (1) and the regulations promulgated under its authority (2) prohibit employers from knowingly hiring illegal aliens. The law and its regulations establish procedures by which all employers, regardless of size, may legally hire applicants.

This article explains the law's implications for physicians as employers.

Beginning June 1, 1987, all employers must verify the identity and eligibility of new employees. In regard to employees hired since Nov 6, 1986, the enactment date of the law, employers must verify the eligibility and identity of those employees who still are employed on June 1, 1987, by Sept 1, 1987.

Employers who violate the provisions of the law for the first time between July 1, 1987, and May 31, 1988, will receive only a citation. These citations will be issued only after "informational contacts" have been made and it is established that the employer has received information concerning its responsibilities and is found out of compliance. However, if an employer violates the law more than once during this period, then the employer will be subject to criminal and civil penalties. Starting June 1, 1988, even a first-time violation of the law will result in penalties against an employer. Civil penalties will range from $250 to $2,000 for a first time violation to $2,000 to $5,000 for a second violation to $3,000 to $10,000 for more than two violations. An employer who fails to comply with the verification requirements of the new law can be fined from $100 to $1,000 for each unverified employee.

In order to comply with the requirements of the law, the employer and employee must complete the employment eligibility verification form (Form I-9), which is available from Immigration and Naturalization Service (INS) district offices, along with the Handbook for Employers explaining the new law. These materials also may be ordered from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402, phone (202) 783-3238. Section 1 of this form must be completed by the employee who, at the same time, must present to the employer documentation that establishes his or her identity and employment eligibility. The employer then must complete section 2 of Form I-9 and physically examine the employee's documentation of identity and employment eligibility.

Any one of the following documents may be used to establish both identity and employment eligibility:

1. United States passport
2. Certificate of US Citizenship (INS Form N-560 or N-561)
3. Certificate of Naturalization (INS Form 550 or N-570)
4. Employment Authorization Card (INS Form I-688A)
5. Temporary Resident Card (INS Form I-688)
6. Alien Registration Receipt Card (INS Form I-151) or Resident Alien INS Form I-551 that contains the bearer's photograph
7. Unexpired foreign passport containing an unexpired stamp indicating "temporary evidence of lawful admission for permanent residence" with "employment authorized"
8. Unexpired foreign passport with an employment authorization stamp and an INS Form I-94 attached bearing the same name as the passport. The individual's employment should not conflict with any restrictions on Form I-94.

When these papers are not available, applicants must provide one document to establish identity and another for employment eligibility.

Acceptable documents for verifying identity include:

1. State-issued driver's license or ID card with either a photograph or identifying information such as name, date of birth, sex, height, and address
2. School ID card with photo
3. Voter's registration card
4. US military card, draft record, or military dependent ID card
5. ID card issued by a federal, state, or local government agency
6. Native American tribal documents
7. Merchant mariner card from the US Coast Guard
8. Canadian driver's license

Acceptable documents for verifying employment eligibility include:

1. Social Security card, provided that the card does not bear the statement "not valid for employment purposes"
2. Unexpired reentry permit (INS Form I-327)
3. Unexpired refugee travel document (INS Form I-571)
4. State Department birth certificate (Form FS 545) or a certification of birth abroad (Form DS-1350)
5. Original or certified copy of a birth certificate issued by a state or local government bearing a seal
6. Employment authorization document from the INS
7. US citizen identification card (INS Form I-197) or an ID card for a resident citizen in the US (INS Form I-179)

The above list of documents may change. The INS has flexibility in determining appropriate documentation, and experience may dictate future changes.

Employers must retain Forms I-9 for three years after the date of hire or one year after termination, whichever is later. According to the regulations, documents furnished by an employee for verification purposes need not be copied. However, making copies and keeping them with Form I-9 would help a good faith defense to any charges.

The INS will provide at least three days notice prior to inspecting any Form I-9 records. Neither a subpoena nor a warrant is necessary for the INS to inspect records.

Medicine and the Law articles are intended to help physicians understand the law by providing legal information on selected topics. This article is published with the understanding that TMA is not engaged in providing legal advice. When dealing with specific legal matters, readers should seek assistance from their own attorneys.

It is illegal for an employer with more than three workers to discriminate against an individual with respect to hiring or discharging, other than an unauthorized alien, on the basis of citizenship status (3). Employers should examine documents carefully before hiring or discharging employees, or they may be open to discrimination charges.

Additional information or a copy of the law is available from Walter D. Cadman, Deputy Assistant Commissioner, Investigations Division, Immigration and Naturalization Service, 425 I Street, NW, Washington, DC 20536, phone (202)633–2997, or 1–800–777–7700 (toll-free).

HELENE A. ALT, JD
TMA Assistant General Counsel

SUZANNE ANDERSON
TMA Personnel Director

REFERENCES

1. 8 USCA sec 1324a (West Supp 1987).
2. 52 Fed Reg 16221 (1987) (to be codified at 8 CFR sec 274a).
3. 8 USCA sec 1324b (West Supp 1987).

Addendum

The following information will be of interest to readers of the April 1987 Medicine and the Law article, "Is there a statute of limitations in a medical professional liability lawsuit?" Having found the temporary legislation that limited the time frame in which a minor must sue a physician for negligence to be unconstitutional, the Texas Supreme Court in *Sax v Votteler* sent Lori Beth Sax's claim back to the trial court for adjudication. Judgment was entered by the trial court in favor of Dr Votteler on a jury finding that no negligence had occurred.

DO YOU KNOW A DOCTOR— WHO NEEDS OUR HELP?

If you can answer "yes" to any one of the questions below:
Do you know a doctor who—
- is experiencing problems **coping** with patients or with the normal stress of a busy practice?
- becomes easily **depressed** or easily annoyed?
- **drinks** more than a moderate amount?
- is self-prescribing mood-altering **drugs?**

—then, you may know a doctor who needs our help. If you feel that you, a colleague, a resident or student need counseling or treatment, won't you give us an opportunity to help? (Strictly confidential contacts can be made through our HOTLINE. Call us collect, anytime.)

HOTLINE—512 477-5575

TMA Committee on
Physician Health & Rehabilitation

David C. Eiland, Jr., M.D., Galveston, Chairman
(409) 761-4776
Richard L. Weddige, M.D., Lubbock, Vice Chairman
(806) 743-2800
G. Hulse Wagner, M.D., Wichita Falls
(817) 766-3551
Guy K. Driggs, M.D., Dallas
(214) 941-3313
Neal H. Gray, M.D., San Antonio
(512) 697-9792
A. Bryan Spires, Jr., M.D., Lubbock
(806) 743-2929
Thomas H. Allison, M.D., Mabank
(214) 590-8761
Gretchen L. Megowen, M.D., Dallas
(214) 696-8227
Adib R. Mikhail, M.D., Houston
(713) 440-4911
Scott Conrad, M.D., Irving, Resident Representative
(214) 401-1609
Mrs. Elmer Vogelpohl, Galveston, Auxiliary Representative
(409) 744-3826
Misty Dawn Laughlin, Temple, Student Representative
(817) 778-4810
Alan McCorkle, Lubbock, Alternate Student Representative
(806) 797-2229

H. Almaraz
Herman Almaraz, MD, a Port Arthur general practitioner, died April 4, 1987. He was 81.

A native of Monterrey, Mexico, Dr Almaraz graduated from the University of Mexico School of Medicine in Mexico City in 1932. He served an internship in Mexico City and then practiced in Monterrey from 1933 to 1950. He moved to Texas in 1952 for a residency at the McKnight State Tuberculosis Sanatorium. In 1958 he began a practice in Port Arthur.

Surviving family members include his wife, Margarita Almaraz, Port Arthur; and sons, Herman Almaraz, Jr, Port Arthur; Alex Almaraz and Robert Almaraz, both of Houston; and Luis Almaraz, Los Angeles.

E.H. Balch
Edwin H. Balch, MD, a general practitioner in Seymour, Tex, for more than 30 years, died April 7, 1987. He was 74.

Dr Balch was born in Slayton, Tex, and attended Decatur Baptist College and Baylor University. In 1938 he received his medical degree from Baylor College of Medicine in Dallas. He served his internship at the City-County Hospital in Fort Worth and began his practice in Floydada, Tex. He later moved to Petrolia, Tex, and practiced there four years before moving to Seymour in 1944. Dr Balch retired from the practice of medicine in 1976.

He is survived by his wife, Fay Merle Balch, Fort Worth; daughters, Mary Pencis, Fort Worth, and Fay Jackson, Tuscaloosa, Ala; son, Edwin Holt Balch, Jr, Phoenix; stepmother, Opal Balch, Seymour; brother, J.B. Balch, Levelland, Tex; and four grandchildren.

P.A. Carpenter
Philip Alexander Carpenter, MD, a longtime Burkburnett family physician, died April 6, 1987, at age 81.

Dr Carpenter was born in Fort Worth and received a bachelor of science degree from Texas Christian University there. In 1929 he graduated from Baylor College of Medicine and then interned at Parkland and St Paul's hospitals, both in Dallas. He continued his postgraduate training at the Mayo Clinic in Rochester, Minn, and at Bellevue Hospital in New York City. Dr Carpenter began his practice in Burkburnett in 1930 and remained there until his retirement in 1985.

He was active in the development of Wichita General Hospital, serving on its board of directors for many years. A past president of the Wichita County Medical Society, Dr Carpenter received the society's Distinguished Service Award in 1984. That same year, the citizens of Burkburnett dedicated the reception room of Wichita General Hospital's oncology and radiation center in his honor.

Dr Carpenter is survived by his wife, Ethel Virginia Carpenter, Burkburnett.

A.M. Thomas
Albert M. Thomas, MD, a Houston urologist, died April 10, 1987, at age 66.

A native of Louisville, Ala, Dr Thomas was a 1944 graduate of Louisiana State University School of Medicine in New Orleans. After an internship at Charity Hospital of Louisiana, Dr Thomas served in the US Army Medical Corps for two years. He continued his medical training with a residency at Charity Hospital. He moved to Houston in 1951.

Survivors include his wife, Betty Thomas, Houston; son, Carter Thomas of California; and daughter, Candace Linder; stepdaughters, Debra Abshire and Karen Perkins; and stepson, Clyde Fendley, Jr, all of Houston.

J.W. Tunstill
James Wright Tunstill, MD, 61, died April 15, 1987. Dr Tunstill was a Fort Worth internist.

He was a native of Fort Worth and received his premedical education at Texas Christian University there. In 1948 he graduated from The University of Texas Medical Branch at Galveston. His postgraduate training was at Indianapolis (Ind) General Hospital, Jackson Memorial Hospital in Miami, the University of Pennsylvania, and Harris Hospital in Fort Worth. Dr Tunstill served for two years in the US Army in Germany. In 1955 he began the practice of internal medicine in Fort Worth.

He is survived by his wife, Joy Stewart Tunstill, Fort Worth; daughter, Kay Tyler, Euless, Tex; sister, Ruby Busby, Fort Worth; and brothers, Jack C. Tunstill and Granville G. Tunstill, both of Fort Worth, and W.A. Tunstill, Roswell, NM.

L.D. Wright
L. David Wright, MD, a Corpus Christi ophthalmologist, died April 2, 1987, at age 65.

Dr Wright, a native of Mexia, Tex, attended Baylor University in Waco. In 1944 he received his medical degree from Tulane University School of Medicine in New Orleans. He remained in New Orleans for an internship and residency at Charity Hospital. He continued his postgraduate training in Washington, DC, at the Armed Forces Institute of Pathology and at the Episcopal EENT Hospital. He moved to Corpus Christi in 1949.

Dr Wright was a former lieutenant commander in the US Navy and a veteran of World War II.

He is survived by his wife, Ruth Wright, and mother, Mrs Lonnie D. Wright, both of Corpus Christi; daughters, Charlotte Burney, Greensboro, NC; Sarah Wright, Durham, NC; Ann B. Wright, New York City; Margaret Jean Wright, Dallas; and Deborah Kaye Wright, Corpus Christi; sons, Nathan Bruce Wright, Dallas, and L. David Wright, Jr, Houston; brother, Joe H. Wright, MD, Corpus Christi; and four grandchildren.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

H. ALMARAZ
Port Arthur, 1906–1987

E. H. BALCH
Seymour, 1913–1987

P. A. CARPENTER
Burkburnett, 1905–1987

A. M. THOMAS
Houston, 1920–1987

J. W. TUNSTILL
Fort Worth, 1925–1987

L. D. WRIGHT
Corpus Christi, 1922–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audio-visual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student	$ 5.00	☐ Patron	$ 100.00
☐ Sustaining	$15.00	☐ Life	$1,000.00
☐ Subscribing	$25.00		

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

JUST ARRIVED:

1987 325 Convertible

The first BMW Convertible offered in over three decades. Its 168-h.p. engine has 39% more power than 1986 3-series.

JUST ARRIVED:

1987 7-Series

An entirely new luxury sedan for 1987. From its aerodynamic exterior to its hand-sewn leather interior, this car's impact will be measured in decades, not years.

JUST ARRIVED:

1987 M-Series

The three new M-Series BMW's represent the two fastest production sedans available in the U.S., (M3 and M5), and a limited edition sports coupe (M6) with such features as a hand built 256-h.p. engine and hand tuned suspension.

Over 150 new BMW's to choose from. All with ABS brakes and 3 year/36,000 mile warranty.

The New BMW

BMW CENTER

FACTORY AUTHORIZED.

4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Achauer BM (ed): *Management of the Burned Patient.* Norwalk, Conn, Appleton & Lange, 1987.

Aluise JJ: *The Physician as Manager,* ed 2. New York, Springer-Verlag, 1987.

Bartholomew RS: *A Practical Guide to Cataract and Lens Implant Surgery.* New York, Churchill Livingstone, 1986.

Brooten KE Jr, Chapman S: *Malpractice. A Guide to Avoidance & Treatment.* Orlando, Fla, Grune & Stratton, Inc, 1987.

Dunn HG (ed): *Sequelae of Low Birthweight: The Vancouver Study.* Philadelphia, J.B. Lippincott Co, 1986.

Ellis D: *Medical Computing and Applications.* New York, John Wiley & Sons, 1987.

Epstein E, Epstein E Jr: *Skin Surgery,* ed 6. Philadelphia, W.B. Saunders Company, 1987.

Feldman SA, Scurr CF, Paton W (eds): *Drugs in Anaesthesia: Mechanisms of Action.* Baltimore, Edward Arnold, 1987.

Filipe MI, Jass JR (eds): *Gastric Carcinoma.* New York, Churchill Livingstone, 1986.

Glorioso N, Laragh JH, Rappelli A (eds): *Renovascular Hypertension. Pathophysiology, Diagnosis, and Treatment.* New York, Raven Press, 1987.

Gokal R (ed): *Continuous Ambulatory Peritoneal Dialysis.* New York, Churchill Livingstone, 1986.

Gold JJ, Josimovich JB (eds): *Gynecologic Endocrinology,* ed 4. New York, Plenum Medical Book Company, 1987.

Griffiths HJ: *Basic Bone Radiology,* ed 2. Norwalk, Conn, Appleton & Lange, 1987.

Hallman GL, Cooley DA, Gutgesell HP: *Surgical Treatment of Congenital Heart Disease,* ed 3. Philadelphia, Lea & Febiger, 1987.

Hau T: *Silvergirl's Surgery: Renal Transplantation.* Austin, Tex, Silvergirl, Inc, 1987.

Hodgkin JE, Petty TL: *Chronic Obstructive Pulmonary Disease. Current Concepts.* Philadelphia, W.B. Saunders Company, 1987.

Holman SR: *Essentials of Nutrition, For the Health Professions.* Philadelphia, J.B. Lippincott Company, 1987.

Jacobs P: *The Economics of Health and Medical Care,* ed 2. Rockville, Md, Aspen Publishers, Inc, 1987.

Jayson MIV (ed): *The Lumbar Spine and Back Pain,* ed 3. New York, Churchill Livingstone, 1987.

Kizer WM: *The Healthy Workplace. A Blueprint for Corporate Action.* New York, John Wiley & Sons, 1987.

Kornblith PL, Walker MD, Cassady JR: *Neurologic Oncology.* Philadelphia, J.B. Lippincott Company, 1987.

Liu DTY, Symonds ME, Golbus MS (eds): *Chorion Villus Sampling.* Chicago, Year Book Medical Publishers, Inc, 1987.

Milunsky A (ed): *Genetic Disorders and the Fetus. Diagnosis, Prevention, and Treatment,* ed 2. New York, Plenum Press, 1986.

Moses RA, Hart WM Jr (eds:) *Adler's Physiology of the Eye. Clinical Application,* ed 8. St Louis, The C.V. Mosby Company, 1987.

Perez CA, Brady LW: *Principles and Practice of Radiation Oncology.* Philadelphia, J.B. Lippincott Company, 1987.

Riehle RA, Newman RC (eds): *Principles of Extracorporeal Shock Wave Lithotripsy.* New York, Churchill Livingstone, 1987.

Scott WN, Stillwell WT (eds): *Arthroplasty: An Atlas of Surgical Technique.* Rockville, Md, Aspen Publishers Inc, 1987.

Taylor EA (ed): *The Overactive Child.* Philadelphia, J.B. Lippincott Co, 1986.

Tweedie J: *Children's Hearing Problems. Their Significance, Detection and Management.* Bristol, England, Wright, 1987.

Vaccination Certificate Requirements and Health Advice for International Travel. Geneva, World Health Organization, 1987.

Weiss RD, Mirin SM: *Cocaine.* Washington, DC, American Psychiatric Press, Inc, 1987.

To show you how many hypertensives stayed on INDERAL® LA (PROPRANOLOL HCl) after a major nationwide trial...

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL® LA stayed on INDERAL LA.[1*]

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.
A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

NOW AVAILABLE...
NEW LOW DOSE
INDERAL® LA 60 mg
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Please see next page for brief summary of prescribing information

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension. It may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

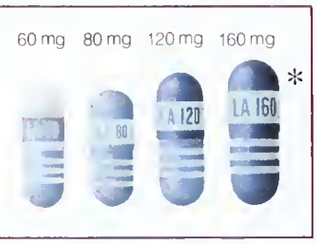
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

1R7119/887

Ayerst AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
7777 Southwest Freeway, Suite 1052, Houston 77074; 713 988-7558

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD

COLON & RECTAL SURGEON
OUT-PATIENT LASER HEMORRHOIDECTOMY

Bowel obstruction from cancer of the colon, volvulus, Crohn's or ulcerative colitis, toxic megacolon, diverticular obstruction, acute or chronic colon bleeding, colovesicle fistula, rectovaginal fistula, rectal fistulas, rectal prolapse, anal incontinence, warts, pruritus ani, rectal abscesses, hemorrhoids and other rectal conditions.

Emergency consultations and referrals; weekends and evenings.

Privileged at Baylor University Medical Center and Methodist Central Hospital.

214 821-4300, answered 24 hours and weekends
214 341-0859, residence

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism

Practice Limited to Endocrinology & Diabetes

5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service
. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-S180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 7S230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-474S

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery

DAVID J. ZEHR, MD—Microsurgery

ARNOLD V. DiBELLA, MD

Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 7S246; 214 823-53S1
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA

Diplomates American Board of Orthopaedic Surgery

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 7S231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops
. . . Another service of your association

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery

JACINTO ZAMBRANO, MD
Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone 817 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3800 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 8116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
David Allen Cech, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
Casey E. Patterson, MD (Retired)
W. Robert Hudgins, MD
Richard H. Jackson, MD

St. Paul Professional Bldg., 5959 Harry Hines Blvd., Suite 620, Dallas, Texas 75235; 214 637-0420

Presbyterian Professional Bldg., 8210 Walnut Hill Lane, Suite 905; Dallas, Texas 75231; 214 369-7596

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American Board of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

TMA HealthWise Series

. . . Another service of your association

ARLINGTON ASSOCIATION OF
NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 77054
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

OCCUPATIONAL MEDICINE

ERIC G. COMSTOCK, MD

Diplomate, American Board of Medical Toxicology

Occupational and Environmental Toxicology

6910 Bellaire Blvd., Suite #12, Houston, Texas 77074
Phone 713 541-3214

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES
Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or 800 872-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 821-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 75204
214 521-1153; 1-800-442-5376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 78205; 512 226-5191

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-800-833-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS

Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD

John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas
77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas
77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

Heights Medical Eye Center, 535 West 20th Street, Houston, Texas 77008;
713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Schubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

TMA Physicians Benevolent Fund
. . . Another service of your association

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA
ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

SAN ANTONIO HEAD & NECK SURGICAL ASSOCIATES, PA

Board Certified Otolaryngologists

Julius F. Marlowe, MD
Michael H. Bertino, MD
G. Paul Laursen, DDS, MD, FACS, FAAFPRS
Harry Schilling, MD
Stephen J. Talley, MD

ENT, Facial Plastic Surgery, Lipo-Suction

Madison Square Medical Building, Suite 304, 311 Camden, San Antonio, Texas 78215; 512 224-5481

Physicians' Plaza, Suite 370, 8038 Wurzbach Road, San Antonio, Texas 78229; 512 690-1326

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES
Dorothy Patras, MD

Anatomic Pathology and Consultation in Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.
J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD
John E. Lomax, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD
Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

WILLIAM E. BARNES, MD
Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN

Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery
Jacinto Zambrano, MD

Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES
302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD

Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS

Excellence in Form & Function

Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 558-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

SAEED BEG, MD, PA

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive Surgery, Hand Surgery

2602 Texas Drive, Irving, Texas 75062
Phone 214 258-0025

PSYCHIATRY

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 381-7181

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

Representing TMA's legislative views
. . . Another service of your association

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

TMA Physician Membership Directory
. . . Another service of your association

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS
Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue, Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza, Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS
Diplomate, American Board of Urology

Adult and Pediatric Urology
Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES
Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology
221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

TMA Action monthly newsletter
. . . Another service of your association

C. F. SKRIPKA, JR, MD, FACS
Urology, Andrology & Neurourology
1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Advertising Directory

Air Force	67
American Physicians Insurance Exchange	14
American Physicians Life Insurance	65
Ayerst Laboratories	77–80
BMW Center	75
Campbell Laboratories, Inc.	67
Curtis 1000 Information Systems	3rd Cover
Davis/Belzung Architects	6
Diagnostic Clinic of Houston	29
Family Practice Recertification	16
Glaxo/Roche	42–44
I. C. System, Inc.	53
Insurance Corporation of America	4
Knoll Pharmaceutical	21, 22
Eli Lilly & Company	40
The Medical Protective Company	38
MEDS	28
Roche Laboratories	1, 2, 17–20, 31
Scott and White Clinic	Back Cover
Michael R. Sharp, Attorney	2nd Cover
Smith Kline & French Laboratories	41
Spring Shadows Glen	2nd Cover
Starlight Village Hospital	96
Texas Medical Association	
Advocacy '87/Speaking Out on the Issues	25
HealthWise Series	70
Memorial Library	74
1988 Calendar of Workshops	7, 8
Texas Medical Association Insurance Program	10
Texas Medical Liability Trust	27
Timberlawn Psychiatric Hospital	Back Cover
The University of Texas Health Center at Tyler	16
The Upjohn Company	39
Vestra-Subco, Inc.	24

Texas Physicians' Directory	81–87
Classified Advertising	88–90

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Medical Director—The City of Port Arthur, Texas is seeking a medical director to plan, organize, direct, and supervise all activities of the city's Public Health Department which provides services to 39,000+ clients annually. The health department operates on a budget of approximately $3.2 million and functions with an 83 member staff. Successful applicant must be a practicing physician and possess at least eight years of responsible professional medical experience with two years of supervisory experience in a public health program. A license to practice medicine in the State of Texas is also required. Salary commensurate with experience and qualifications. Interested parties should submit vita by August 31, 1987 to Personnel Specialist, City of Port Arthur, P.O. Box 1089, Port Arthur, Texas 77640. EOE-M/F.

Psychiatrist—The Laredo State Center has an opening for a full-time phychiatrist. Valid Texas license. Board certified or eligible. Coordinates and supervises all medical and psychiatric treatment services. If interested, contact the Laredo State Center, 512 723-2926, P.O. Box 1835, Laredo, Texas 78044-1835. EOE.

Staff Psychiatrist—Opening for staff psychiatrist in largely geropsychiatric, JCAH and Medicare accredited hospital. Salary up to $72,304 for board certified psychiatrist and up to $65,100 for board eligible psychiatrist. Patient census 430 to 450. Nineteen member medical staff includes nine psychiatrists and three neurologists. Excellent location in the Texas Hill Country, one hour from San Antonio. Good fringe benefits. Must have Texas license. Call or write G. W. Harrelson, Jr., MD, Clinical Director, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78029-1468; 512 896-2211. An EEO/AAP employer.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas: Full time ED positions available in the greater Houston area with local group. Please send CV to STAT Physicians, P.O. Box 79348, Houston, Texas 77279-9348; or call 713 468-7810.

Excellent opportunity in moderate volume facility. Bethania Regional Health Care Center sees approximately 9,000 annual outpatient visits. Both full-time and part-time opportunities. Excellent compensation and professional liability insurance procured on your behalf. Contact: Lori Jordan, Coastal Emergency Services, Inc., 1425 Greenway Dr., Suite 450, Irving, Texas 75038 or call collect 214 258-5038.

Texas—Full-time ED positions available in North Texas area. Small group, flexible scheduling. ACLS and US education required. Send CV to Ms. Neu, Numed Systems, P.O. Box 2122, Denton, Texas 76202.

Wanted—A physician for a minor emergency clinic in Bryan to work from the first of August, 3:00 pm to 11:00 pm, Monday through Friday, as a full-time physician. Call S. Nickerson, 409 846-4756.

MediClinic Houston is now offering immediate openings for full-time positions for career minded physicians. Part-time and weekend coverage also available in all five clinic locations. Excellent remuneration and paid malpractice insurance. Please send CV to MediClinic, 6604 Southwest Freeway, Houston, Texas 77074 or call M. A. Fazlani, MD, 713 468-7991.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by Health5tar Corporation. Health5tar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, Health5tar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Family Practice—If you are a well qualified family physician you can work with PRN, Ltd. in any number of community settings and practice styles. You will receive excellent income without sacrificing your freedom and independence. We provide locum tenens assignments, practice trial options, and permanent placement opportunities throughout the state. Call your colleagues at 1-800-531-1122, or write Kenneth W. Teufel, MD, 1000 North Walnut, Suite A, New Braunfels, Texas 78130.

Family practice physician for 10-member multi-specialty group located in the Rio Grande Valley. Clinic has six family practice physicians. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Wanted—General practitioner/industrial medicine. Position available with multispecialty group. Houston metropolitan area. Salary first year plus bonus. Please provide curriculum vitae with initial inquiry. Please reply to Ad-669, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Family practice physician (BC/BE) to associate with established FP in clinic in small, scenic Hill Country town near San Antonio. Primarily ambulatory/emergency practice with some surgery. Salary plus incentive. Partnership possible. J. E. McCoy, MD, 120 Medical Drive, Boerne, Texas 78006; 512 249-9307.

Your Own Family Practice—One physician practicing, seeking second to own/operate clinic. Financial assistance available. Excellent hospital facility. Strong market area. Supportive, family-oriented community. Diverse recreational opportunities. Contact Mike Shafer, Administrator, Fritzer Memorial Hospital, P.O. Box 218, Oxford, NE 68967; 308 824-3271.

Small FP group seeks recently trained, BC associate for practice in Panhandle community of 25,000 (service area population 75,000). Modern hospital. Competitive incentive package. Many area amenities. Easy access to Amarillo and airport. For information, without cost or obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

San Antonio Vicinity—Seeking board certified FP desiring full range of family medicine, including OB. Modern hospital, new office space adjacent to hospital. No evening or weekend ER call required. Share call with young, BC FP. Excellent incentive package. Hunting mecca. Contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Dallas Vicinity—Immediate need for recently-trained, BC FP to associate with small FP group. Shared call. OB preferred. Modern, 150-bed hospital. Very lucrative practice potential, generous incentive package, early partnership. Excellent lifestyle in family-oriented community, excellent economy. Contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Small FP group seeks associate for July 1988. OB preferred, shared call. Progressive Central Texas community of 5,600 within one hour of Austin. Award winning schools. Modern hospital. Competitive incentive package, early partnership. Excellent lifestyle in family-oriented community, healthy economy. Contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Raise your family in a friendly small town with the convenience of a large city just 30 miles away. Excellent schools. New hospital and new clinic needs a family practice physician interested in practicing medicine in West Texas. Contact Charles Butts, Administrator, Crane Memorial Hospital, 1310 S. Alford, Crane, Texas 79731; 915 558-3555.

Houston suburban. Busy FP needs help with large, growing practice. Please send CV to W. Sanford Smith, Professional Practice Management, Inc., 900 Rockmead, Kingwood, Texas 77339; 713 358-8113.

Internal Medicine

Tyler—Internal medicine space for sale. Located in beautiful East Texas in a clinic of four internists. In-house laboratory, x-ray, and treadmill facilities available. Convenient to hospitals. Call 214 597-6902.

Outstanding Practice Opportunity—General internal medicine to assume busy solo practice in Austin-San Antonio corridor. Diverse sources of income including hospital EKG. No HMOs or minor emergency clinics. Superlative office help. Contact R. Clemons, MD, 908 E. Court, Seguin, Texas 78155; 512 379-6821.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

OBG physician for 10-member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Young, American-trained, BC OBG seeks compatible associate for practice in Panhandle community of 25,000 (service area population 75,000). Modern hospital. Competitive incentive package. Many area amenities. Easy access to Amarillo and airport. For information without cost or obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Progressive Central Texas community, within one hour of Austin, seeks BE/BC obstetrician/gynecologist. Award winning schools. Modern hospital. Competitive incentive package. Call coverage provided. Excellent lifestyle in family-oriented community. For information, without cost or obligation, please contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Fort Worth Vicinity—Immediate need for BE/BC OBG. Attractive, affluent community, strong economy. Recreational mecca. Modern hospital. Share call with young, American-trained, BC OBG. Competitive incentive package. Easy access to D/FW. For information, without cost or obligation, contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Position for board certified/eligible radiologist with experience in US, CT, nuclear medicine, mammography, angiography and interventional radiology. Join group serving clinic and two community hospitals in Central Texas. Salary leading to partnership. Reply to 2027 S. 61st, Suite 116, Temple, Texas 76501; 817 774-9994.

South Texas Diagnostic BC Radiologist Needed—158 bed hospital, outpatient clinic. CT, mammo, US, NM, D5A, interventional and general radiology (MRI possible in near future). Early equal benefits for right person. Send CV to P.O. Box 5567, Brownsville, Texas 78520.

Diagnostic Radiologist—Immediate need for recently trained, BC physician to associate with established radiology group serving regional medical center. All modalities, including MRI and interventional radiology. Family-oriented community, strong economy. Easy access to D/FW. Excellent incentive package, early partnership. Contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Opening for radiologist with experience in angio, CT, US, nuclear medicine and interventional techniques to join group of six radiologists in private office and two medical centers with a total of 406 beds, personnel in radiology departments, 32. Magnetic resonance experience helpful. Respond to Ad-673, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Other Opportunities

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129. Toll free in Texas 1-800-331-8472.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Fred Brinker, Medical Division, J51, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-0475.

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, The Doctor's Office, 2101 Lockhill-Selma, Suite 208, San Antonio, Texas 78213.

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or BE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78539; 512 383-1481.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include OBG, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-8080; or send CV to Mitchell & Associates, Inc., P.O. Box 1804, Scottsdale, Arizona 85252.

Cardiologist, BE, BC—Excellent opportunity with outstanding potential. Modern progressive hospital in an ideal southern family community. Write AD-663, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Family Practice and Internists—BC/BE, needed to join multispecialty and single specialty practices. Substantial salary, plus full benefits. Full partnership available. City population 25,000. 160-bed JCAH approved hospital. Located one hour from Memphis, Tennessee on I-55. Send CV to Marvin D. Hendrix, Clinic Administrator, P.O. Box 2311, Jonesboro, Arkansas 72402.

Full and part-time experienced physicians for established and expanding family care clinic in Northwest Houston. Excellent remuneration and working conditions; flexible scheduling. Contact Director, Medical Center, 7925 FM 1960 West, Houston, Texas 77070; 713 469-4560.

Expanding 20-physician multispecialty group has excellent opportunity for the following specialists: family practitioner, pediatrician, OBG, orthopaedic surgeon, and dermatologist. High beginning guaranteed salary in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Administrator, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720.

Primary care physicians to staff freestanding, urgent care centers in West Texas. Base salary $60,000, plus percent incentives. Benefits include malpractice and health insurance. Partnership opportunity after first year. Forty hour work week with flexible scheduling. CV with reference to Ted Zegarra, MD, Response Medical Associates, 5774 North Mesa, El Paso, Texas 79912.

Immediate opportunity for family practitioner/GP, general surgeon, OBG willing to do family practice to join a well established and growing practice. No OB service available in the entire county. Partnership/association without investment, eventual takeover possible. Please reply to Pedro J. Devia, MD, 610 Grayson, Nocona, Texas 76255.

Pediatrician, Brownsville, Texas—Vacation area near the ocean and Mexico. Enjoy practice in a modern, spacious, custom built clinic with lab, x-ray. Pleasant hours, good beginning salary. Contact Adele Bromiley, MD, 2335 Central Blvd., Brownsville, Texas 78520; 512 546-3126.

Desirable Texas opportunities available for BC/BE physicians: Neurosurgeon, OBG, orthopedic surgeon, and urologist. Excellent financial packages available. Affiliated with modern 250-bed hospital in 60,000+ coastal community. Send CV to Mike Jenkins, RH Medical Group, Inc., 12651 Briar Forest, Suite 180, Houston, Texas 77077; or call 713 496-7777.

Internist, general surgeon, and orthopod for growing 10-provider multispecialty group in Montana. Dominant group in area, excellent practice environment. Salary leading to partnership. Send CV to Peter Berger, Administrator, Havre Clinic, P.O. Box 7348, Havre, MT 59501.

Doctors needed in Mercedes, Texas, 12,000 patients in the Queen City of the Rio Grande Valley. Call 512 565-2221.

Expanding Texas Multispecialty Group—Dallas/Fort Worth, requires BE/BC physicians: Internal medicine, OBG, family practice, orthopedic surgery, anesthesiology, general surgery, pediatrics, radiology, urology, dermatology, psychiatry. Competitive salary. Extensive benefits. Direct inquiry, CV to: Medical Director, Permanente Medical Association of Texas, 12720 Hillcrest, Suite 600, Dallas, Texas 75230.

Excellent Texas opportunities—ENT, family practitioner, general practitioner, general surgeon, internal medicine, OBG, ophthalmologist, oncologist, pediatrician, radiation oncologist, to practice in one of several lake area communities, in the beautiful Piney Woods area of East Texas. Excellent quality of life, first year guarantee, etc. Other Texas opportunities available also. Reply with CV to Medical Support Services, Armando L. Frezza, 11509 Quarter Horse Trail, Austin, Texas 78750; 512 331-4164.

Solo otolaryngologist—unopposed—retiring for health reasons. Twenty-eight miles east of Dallas. Large draw, varied patient load. AMI affiliated with guarantee. Sell practice at whatever suits you. Turn key or "?". Multispecialty within complex. Many amenities. Call direct 214 563-3323 or write for detailed prospectus to J. M. Anthony, MD, 1553 Hwy. 34 South, Suite 800, Terrell, Texas 75160.

OPPORTUNITIES SOUGHT

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. 512 477-6704, ext. 263.

Experienced neurologist, BC, with four years experience performing and interpreting MRI and CT of head and spine as well as carotid ultrasound. Seeks affiliation with group needing expertise in these areas. Please reply to Ad-666, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Wanted: By ACLS-certified, Texas-licensed general surgeon, DABS, FACS, a full time ER position, directorship if possible, in Texas, preferably central or southeast portion of state. Former USN medical officer and former emergency services director and chief of surgery in 300-bed, big city hospital. Past 10 years have worked in rural hospitals. Please reply to Ad-675, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

American graduate, extensive experience, seeks association with or purchase of thriving family or internal medicine practice or minor emergency facility. Please reply to Ad-674, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than 50% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 18164, Dallas, Texas 75218; 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $1275; Cardionostic Holter recorder (cassette available) from $995. Smallest, slightest Holters update. Fast service (24-48 hrs.) turnover. Hookup kits starting at $4.95. Special introductory offer of three free tests with any purchase or lease of recorder. Cardiologist overread available for $15. If interested call 301 870-3626.

A.D.R. (A.T.L.) 4000 s/I ultrasound machine with aluminum carrying case and roll about table. 3.5 mega hertz sector and linear transducers with video-out. Price $7,900. Contact 512 592-2283 or 512 592-0611.

Wanted—Used mammographic, ultrasound or x-ray equipment. Call Dr. Vancura, 817 774-9994; 2027 S. 61st, Suite 116, Temple, Texas 76501.

Fluoroscopic Picker X-ray Machine—12 years old, with automatic colimation and phototiming and upright Bucky with mirror image intensifier but no television. In excellent working condition. Please call 313 358-3410, 9 am-5 pm.

Antique medical-office furniture: All wooden—examining tables, baby scales, cabinets. Contact Joseph Cotropia, MD, 512 478-4137 or 512 473-8534.

Doctor, you can't beat the quality or the price! Holter Monitor Scanning Service. Physician owned, trained, and supervised. Now using UP Service for faster turnaround time. No contracts to sign. We can arrange for lease/purchase of Holter equipment. Now is the time to own your own recorder for as little as $49 a month. Call DCG Interpretation 313 879-8860.

Office Space/Property

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

North Dallas Suburb—Up to 3,400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 867-6500.

Abilene—Office, sale-lease in medical garden condominiums complex of four offices around a courtyard with surgeon, ENT, OBG. 1,200 sq. ft., four treatment rooms (all plumbed for air, water, vacuum, oxygen, nitrous), private office, sterilization, hospital nearby. 915 676-7707.

For Sale—Medical building, brick front, seven rooms, one block from major downtown hospital. Large rear parking area. Owner R. M. Arledge, MD. Please refer inquiries to Doris Thieman, REALTOR, 2206 Live Oak, San Angelo, Texas 76901; 915 944-2677.

West Texas Whitetail Deer Lease—Offering two ranches in Terrell County on the Pecos River:

(1) 7,000 acres; no commercial hunting in seven years; (2) 2,400 acres; no commercial hunting in five years. Three day hunts up to parties of eight for $600 per gun. Camping hookups available. Bow-hunting, $150 per person. Old Banner Ranch, P.O. Box 123, Dryden, Texas 78851; 915 753-2315. Cy Banner Ranch, P.O. Box 147, Dryden, Texas 78851; 915 753-2323.

Practices

Active Solo Practice/Internal Medicine—Retiring late in 1987. 1,700 sq. ft. modern building. Fully equipped, laboratory, x-ray, three examining rooms, tables, cabinets, etc. Sell or lease building. Sell equipment at small fraction of replacement cost. 2,000 active patients. Will introduce. Practice free. Roy Daugherty, MD, 4006 West 33rd, Amarillo, Texas 79109.

Practice For Sale—Dallas, Casa Linda/White Rock East area. Doctor retiring. Well established practice, excellent for internal medicine or family practice. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker; 214 327-7765.

Medical Practice For Sale/Partnership—Busy family practice would like to sell or form a partnership for a well established second family practice clinic and minor emergency center located in the Northeast Houston area. Prospective physician must be able to practice full time with financial resources for 50 percent partnership investment. For further information contact: Atascocita Management Corporation, 8067 FM 1960 East, Humble, Texas 77346; phone 713 852-8040 between the hours of 12-7 pm.

Jackson and Coker has 40 practices for sale in 25 states. Specialties include: FP, IM, ORS, OBG, OPH, PD, N, GS, and U. I'm sure one of them is just the practice you have been looking for. Call today for more information. Bob Kinberger, 404 393-1210.

Family practice/internal medicine practice for sale. Houston urban. Solo practice. Well established. In thriving residential/business area. Near major hospitals. Modern building. Well equipped. Good growth potential. Good cash flow. Reasonable asking price. No financing. Serious inquiries only. Contact Ms. D. Mema, 4815 Apollo Drive, Houston, Texas 77018.

Houston, established minor emergency and family practice clinic at desirable location. X-ray, lab, no OB, no Medicare, no Medicaid, no HMO. Big growing potential. Grossed $256K. For sale $129K. No financing. Prime real estate optional. Serious inquiries only. Reply to Ad-660, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Practice For Sale—FP/GP or internist. Abilene, Texas, population 110,000. Across from 400-bed teaching hospital. Terms negotiable. 915 672-8181 or 915 698-7946; 1234 Sylvan, Abilene, Texas 79605.

Austin Vicinity—Busy internal medicine practice available in attractive community. Shared call coverage. Established practice with proven capability to generate lucrative income in a desirable community offering an excellent lifestyle. Includes all equipment and furnishings. Reasonable price and terms. Contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Dallas Area—Established general pediatric practice for sale. Grossing in excess of $270,000 per year. Shared call coverage. Includes all equipment and furnishings. Reasonable price and terms. Across street from modern hospital. For information without cost or obligation contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 75080. Contact Dan Lewis at 214 437-1180 office or 214 238-7129 evenings.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

THE PRESIDENT DOESN'T TAKE AN OATH TO DEFEND THE AMERICAN FLAG OR THE STATUE OF LIBERTY.

The President takes an oath to defend something even more important than a majestic symbol of our country.

The President takes an oath to defend the Constitution of the United States. A document that has been described as the greatest leap forward for freedom in human history. A document that is the foundation of our country. And the means by which we achieve the rule of law and protect our freedom.

As we commemorate the Bicentennial of the U.S. Constitution, there is no better way for you as an American to reaffirm the principles for which our country stands than to learn more about the Constitution.

The words we live by.

THE CONSTITUTION
The words we live by

To learn more about the Constitution write: Constitution, Washington, D.C. 20599. The Commission on the Bicentennial of The U.S. Constitution. Ad Council

COURSES

SEPTEMBER

Anesthesiology

Sept 19-20, 1987
4TH ANNUAL PAIN SYMPOSIUM. Texas Tech University Health Sciences Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University HSC, Lubbock, TX 79430 (806) 743-2929

Cardiovascular Disease

Sept 9-12, 1987
UPDATE IN CARDIOLOGY/CARDIOVASCULAR BOARD REVIEW. Indiana Convention Center, Indianapolis. Fee $475 members, $525 nonmembers. Category 1, AMA Physician's Recognition Award; 1 hour. Contact Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

General Medicine

Sept 10-11, 1987
NIH HEALTH TECHNOLOGY ASSESSMENT WORKSHOP/HEALTH BENEFITS OF PETS. Masur Auditorium, Warren Grant Magnuson Clinical Center, Rockville Pike, Md. No charge. Category 1, AMA Physician's Recognition Award; 10.5 hours. Contact Sharon Feldman, Prospect Associates, 1801 Rockville Pike, Suite 500, Rockville, MD 20852 (301) 468-6555

Sept 18-19, 1987
4TH ANNUAL MEXICAN AMERICAN SCIENTIFIC SYMPOSIUM: US AND MEXICO PHYSICIANS/A CHANGING HEALTH CARE ENVIRONMENT. St Anthony Hotel, San Antonio, Tex. Fee TBA. Credit TBA. Contact Office of Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Sept 26, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. Houston. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Neurology

Sept 24-30, 1987
2ND ANNUAL CONFERENCE ON THE FOUNDATIONS OF BEHAVIORAL NEUROLOGY/ELECTROLYTES AND TRACE METALS AFFECTING BRAIN DYSFUNCTION AND BEHAVIOR. Hong Kong Sheraton, Hong Kong. Fee TBA. Category 1, AMA Physician's Recognition Award; 25 hours. Contact Southern California Neuropsychiatric Institute, 6794 La Jolla Blvd, La Jolla, CA 92037 (619) 454-2120

Obstetrics and Gynecology

Sept 17-18, 1987
14TH ANNUAL PERINATAL SEMINAR. Sid Richardson Auditorium, Scott and White Hospital, Temple, Tex. Fee $65. Category 1, AMA Physician's Recognition Award; 11 hours. Contact Susan Larson, 2401 S 31st, Temple, TX 76508 (817) 774-4083

Organ Transplantation

Sept 8-11, 1987
INTERNATIONAL ORGAN TRANSPLANT FORUM. David L. Lawrence Convention Center, Pittsburgh, Pa. Fee $250. Category 1, AMA Physician's Recognition Award; 26 hours. Contact International Organ Transplant Forum, Office of the Secretariat, DeSoto at O'Hara Streets, Pittsburgh, PA 15213 (412) 647-3490

Plastic Surgery

Sept 27-30, 1987
PLASTIC SURGERY OF THE BREAST/THE ART AND SCIENCE 1987 UPDATE. Eldorado Hotel, Santa Fe, NM. Fee $600 members, $650 nonmembers. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Plastic Surgery Education Foundation, 233 N Michigan Ave, Suite 1900, Chicago, IL 60601 (312) 856-1818

Radiology

Sept 14-18, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Baylor Center for Imaging Research, The Woodlands, Tex. Fee $1,000 physicians, $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

Sept 19-20, 1987
REGIONAL REVIEW COURSE IN HAND SURGERY. Atlanta. Fee TBA. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Terri Harrington, American Society for Surgery of the Hand, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

OCTOBER

Basic Sciences

Oct 23-24, 1987
6TH SOUTHERN BIOMEDICAL ENGINEERING CONFERENCE. The Regent Hotel, Dallas. Fee $80 before Oct 1, $100 after Oct 1. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Cardiovascular Disease

Oct 7-10, 1987
CARDIOLOGY AND CARDIOVASCULAR SURGERY: INTERVENTIONS, 1987. Westin Galleria Hotel, Houston. Fee $375 physicians, $225 abstract presenters, $200 housestaff, $225 nurses. Category 1, AMA Physician's Recognition Award; 24 hours. Contact Debby Butler, PO Box 20269, Mail Code 3-276, Houston, TX 77225 (713) 791-2157

Oct 22-24, 1987
NEW TECHNIQUES AND CONCEPTS IN CARDIOLOGY. Hyatt Regency Hotel, Washington, DC. Fee $350 members of American College of Cardiology, $395 nonmembers of ACC, $200 residents, fellows. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Regis-

tration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Oct 15-17, 1987
CARDIOLOGY UPDATE, 1987. Quail Lodge, Carmel, Calif. Fee $360 members of American College of Cardiology, $425 nonmembers of ACC. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Critical Care Medicine

Oct 7-9, 1987
EMERGING TRENDS IN CRITICAL CARE 1987. Crowne Plaza Hotel, Orlando, Fla. Fee TBA. Category 1, AMA Physician's Recognition Award; 15 hours. Contact Rick Mace, Executive Director, Florida Heart Institute, 500 E Rollins, Suite 101, Orlando, FL 32803 (305) 897-1575

Emergency Care

Oct 22-24, 1987
EMERGENCY MEDICINE UPDATE. Westin Hotel-Galleria, Dallas. Fee $125. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Endocrinology

Oct 9-10, 1987
INSULIN THERAPY IN THE LATE 1980s. Sheraton South Padre Island Beach Resort, South Padre Island, Tex. Fee $75-$90. Category 1, AMA Physician's Recognition Award; 8.5 hours. AAFP prescribed. Contact Daniel Snare, American Diabetes Association, PO Box 14926, Austin, TX 78761 (512) 343-6981, 1-800-252-8233

Oct 23-24, 1987
MANAGEMENT OF THE COMPLICATIONS OF DIABETES. Westin Oaks Hotel, Houston. Fee TBA. Credit TBA. Contact Carol Soroka, Office of Continuing Education, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Oct 23-24, 1987
2ND ANNUAL DIABETES CENTER CLINICAL SYMPOSIUM. La Mansion del Rio Hotel, San Antonio, Tex. Fee $125. Category 1, AMA Physician's Recognition Award; 7.1 hours. Contact Abby Kurth, Education Coordinator, Centers of Excellence, 8026 Floyd Curl Dr, San Antonio, TX 78229 (512) 692-3545

Family Medicine

Oct 17-18, 1987
CHRONIC PAIN MANAGEMENT IN PRIMARY CARE. Marriott Hotel-Medical Center, Houston. Fee $150, Category 1, AMA Physician's Recognition Award; 12 hours. Contact Sam Nixon, MD, Division of Continuing Education, The University of Texas Health Science Center, 1100 Holcombe Blvd, Houston, TX 77225 (713) 792-4671

General Medicine

Oct 23-25, 1987
HANDS AND FEET: A PRIMARY CARE SYMPOSIUM. YO Hilton, Kerrville, Tex. Fee TBA. Credit TBA. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Infectious Diseases

Oct 12-15, 1987
ADVANCES IN THE DIAGNOSIS AND TREATMENT OF IMMUNOLOGIC AND INFECTIOUS DISEASES. Westin Galleria Hotel, Houston. Fee $305 member of American College of Physicians before 1982, resident or research fellow; $230 member ACP after 1982 or associate of ACP; $400 nonmember. Category 1, AMA Physician's Recognition Award; 23.5 hours. Contact American College of Physicians, PO Box 7777-R-0510, Philadelphia, PA 19175

Obstetrics and Gynecology

Oct 9-10, 1987
9TH ANNUAL SEMINAR IN OBSTETRICS AND GYNECOLOGY. Texas Tech University Health Sciences Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University HSC, Lubbock, TX 79430 (806) 743-2929

Ophthalmology

Oct 9, 1987
CURRENT CONCEPTS IN GLAUCOMA MANAGEMENT. The University of Texas Health Science Center, Room D1.600, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Orthopedic Surgery

Oct 29-31, 1987
DALLAS SHORT COURSE: ORTHOTICS AND PROSTHETICS. The University of Texas Health Science Center, Dallas. Fee $175. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Ann Carlton, Department of Orthopedic Surgery, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3525 or (214) 688-2166

Pediatrics

Oct 2-3, 1987
11TH ANNUAL PEDIATRICS POSTGRADUATE CONFERENCE. Holiday Inn-Civic Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 743-2929

Oct 16-17, 1987
PRIMARY CARE PEDIATRICS FOOTBALL WEEKEND. Sheraton Hotel, Waco, Tex. Fee $100. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Radiology

Oct 26-28, 1987
MAGNETIC RESONANCE IMAGING/NIH DEVELOPMENT CONFERENCE. Masur Auditorium, Warren Grant Magnuson Clinical Center, Bethesda, Md. Fee TBA. Credit TBA. Contact Sharon Feldman, Prospect Association, Suite 500, 1801 Rockville Pike, Rockville, MD 20852 (301) 468-6555

Oct 30-Nov 1, 1987
DIAGNOSTIC RADIOLOGY UPDATE. Lincoln Hotel, Dallas. Fee $325. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Dolly Christensen, Department of Radiology, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2502 or 688-2166

Surgery

Oct 17-18, 1987
REGIONAL REVIEW COURSE IN HAND SURGERY. Denver. Fee TBA. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Terri Harrington, American Society for Surgery of the Hand, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Oct 30-31, 1987
GENERAL SURGERY UPDATE, 1987. Marriott Hotel, Medical Center, Houston. Fee $200. Category 1, AMA Physician's Recognition Award; 12 hours. AAFP prescribed. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

NOVEMBER

Critical Care Medicine

Nov 12-14, 1987
7TH ANNUAL WILLIAM BEAUMONT ARMY MEDICAL CENTER

TRAUMA SYMPOSIUM: CONTROVERSIES IN HEAD AND NECK TRAUMA. William Beaumont Army Medical Center, El Paso, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; 20 hours. Contact LTC Troy Reyna, Chief, Trauma Service, William Beaumont Army Medical Center, El Paso, TX 79920-5001 (915) 569-2621 or (915) 569-2787

Gastroenterology

Nov 14, 1987
GASTROINTESTINAL ENDOSCOPY: PERSPECTIVES AND REFLECTIONS. Lincoln Hotel Post Oak, Houston. Fee TBA. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

Nov 8, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. San Antonio. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Internal Medicine

Nov 20-21, 1987
UPDATE IN SEXUALLY TRANSMITTED DISEASES. The University of Texas Health Science Center, Dallas. Fee $75. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Obstetrics and Gynecology

Nov 3-7, 1987
CONTEMPORARY ISSUES AND PRACTICES IN OB/GYN. Lincoln Hotel, Dallas. Fee $475 complete course, $325 basic course, $150 pathology course. Category 1, AMA Physician's Recognition Award; 36 hours. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Nov 4-6, 1987
UPDATE IN PELVIC AND VAGINAL SURGERY. Four Seasons Hotel, San Antonio, Tex. Fee $250. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Nov 13-14, 1987
OFFICE GYNECOLOGY AND FOOTBALL WEEKEND. Texas A&M College of Medicine, College Station, Tex. Fee $125. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Oncology

Nov 8-11, 1987
GENETIC MECHANISMS AND CANCER/40TH ANNUAL SYMPOSIUM ON FUNDAMENTAL CANCER RESEARCH. Westin Galleria Hotel, Houston. Fee $300 before Oct 21, $350 after Oct 21. Credit TBA. Contact Office of Conference Services, M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

Pediatrics

Nov 13-14, 1987
PEDIATRICS FOR THE PRACTITIONER: 21ST ANNUAL KENNETH C. HALTALIN PEDIATRICS SEMINAR. Location TBA. Fee TBA. Category 1, AMA Physician's Recognition Award; 11 hours. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Psychiatry

Nov 21, 1987
UPDATE IN PSYCHIATRY: ANXIETY DISORDERS FROM FREUD TO PHYSIOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Orthopedic Surgery

Nov 13-14, 1987
THE DISTAL RADIOULNAR JOINT: PROBLEMS AND PROCEDURES. Hotel Royal Plaza, Orlando, Fla. Fee $425 before Oct 16, $475 after Oct 16. Category 1, AMA Physician's Recognition Award; 12.25 hours. Contact the American Society for Surgery of the Hand, 3025 South Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Radiology

Nov 4-7, 1987
7TH FUNDAMENTALS OF MRI. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Surgery

Nov 4-7, 1987
2ND INTERNATIONAL CONGRESS ON CYCLOSPORINE. Sheraton Washington, Washington, DC. Fee $300 professionals, $150 paraprofessionals and others. Credit TBA, 26 hours. Contact Alice Reardon, Continuing Education Division, G.104 MSB, The University of Texas Medical School, 6431 Fannin, Houston, TX 77030 (713) 792-5346

DECEMBER

Computer Applications

Dec 7-8 and Dec 10-11, 1987
COMPUTER APPLICATIONS: AN INTRODUCTORY WORKSHOP. Houston. Contact Robin Murray, The American College of Obstetricians and Gynecologists, 600 Maryland Ave, SW, Washington, DC, 20024-2588 (202) 638-5577, ext 343

Emergency Care

Dec 6-12, 1987
EMERGENCIES IN INTERNAL MEDICINE. St Thomas, Virgin Islands. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Family Medicine

Dec 11-12, 1987
2ND ANNUAL PRIMARY CARE RESEARCH METHODS AND STATISTICS. San Antonio, Tex. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Infectious Diseases

Dec 5-6, 1987
2ND ANNUAL INFECTIOUS DISEASES SYMPOSIUM. El Paso, Tex. Contact Karen DeLong, Providence Memorial Hospital, 2001 N Oregon St, El Paso, TX 79902 (915) 542-6001

Pathology

Dec 12, 1987
44TH ANNUAL PATHOLOGY SEMINAR: PROBLEMS IN LIVER PATHOLOGY. San Antonio, Tex. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

Dec 3-6, 1987
INNOVATIVE AND CONTROVERSIAL STRATEGIES IN REHABILITATION. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Radiology

Dec 7-11, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. The Woodlands, Tex. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Risk Management

Dec 18, 1987
A CASE STUDY APPROACH TO RISK MANAGEMENT AND MALPRACTICE. Miami. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Surgery

Dec 3-4, 1987
SURGICAL HEALTH POLICY AND FINANCE. New York. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

JANUARY

Orthopedic Surgery

Jan 16, 1988
DIABETIC FOOT CONFERENCE. Location TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Radiology

Jan 25-29, 1988
ANATOMY FOR RADIOTHERAPY TREATMENT PLANNING. San Antonio, Tex. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Sports Medicine

Jan 21-23, 1988
15TH ANNUAL SPORTS MEDICINE SYMPOSIUM. San Antonio, Tex. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Urology

Jan 23-24, 1988
TRANSITIONAL CELL CARCINOMA OF THE URINARY TRACT. New Hyde Park, NY. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

FEBRUARY

Anesthesiology

Feb 7-13, 1988
BAY-CAP XI: TACO IV. Kauai, Hawaii. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Geriatrics

Feb 18-20, 1988
MANAGEMENT OF THE ELDERLY II. Bal Harbour, Miami Beach, Fla. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Feb 27-28, 1988
9TH ANNUAL GERIATRIC MEDICINE: SELECTED TOPICS. San Antonio, Tex. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Neurology

Feb 2-7, 1988
NEUROLOGY UPDATE 1988. Bal Harbour, Miami Beach, Fla. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Plastic Surgery

Feb 26-28, 1988
BASIC RHINOPLASTY. Dallas. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Urology

Feb 10-14, 1988
CALCULI UPDATE 1988. Acapulco, Mexico. Contact Alice Henderson, 6750 West Loop South, Ste 900, Bellaire, TX 77401 (713) 665-7500

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of

Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

EF TELEPLAST TELECONFERENCE

Oct 17, 1987, Saturday, 10 am to 12 pm
COSMETIC EYELID SURGERY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

Dec 5, 1987, Saturday, 10 am to 12 pm
SECONDARY RHINOPLASTY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

AUGUST

MEDICAL OFFICE MANAGEMENT INSTITUTE
Aug 24-28, 1987, Sheraton Park Central Hotel and Towers, Dallas

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
Sept 16, 1987, Bexar County Medical Society Headquarters, San Antonio
Sept 18, 1987, El Paso Marriott, El Paso
Sept 29, 1987, Holiday Inn Civic Center, Lubbock
Sept 30, 1987, Holiday Inn Coiuntry Villa, Midland

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Sept 12, 1987, Four Seasons Hotel, Austin

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
Sept 16, 1987, Bexar County Medical Society Headquarters, San Antonio
Sept 18, 1987, El Paso Marriott, El Paso
Sept 29, 1987, Holiday Inn Civic Center, Lubbock
Sept 30, 1987, Holiday Inn Country Villa, Midland

OCTOBER

GEARING UP FOR RETIREMENT—4 hours
Oct 23-25, 1987, Inn on the Park, Houston

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
Oct 2, 1987, Dallas Marriott-Market Center, Dallas
Oct 9, 1987, Sheraton Tyler Inn and Towers, Tyler
Oct 13, 1987, Hillcrest Baptist Medical Center, Waco
Oct 14, 1987, Green Oaks Inn and Conference Center, Fort Worth
Oct 16, 1987, Marriott Hotel-Astrodome, Houston

HOW TO RUN A MORE PROFITABLE PRACTICE
Oct 6, 1987, The Lincoln Hotel Post Oak, Houston
Oct 7, 1987, Wyndham Hotel, San Antonio
Oct 8, 1987, Guest Quarters, Austin

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Oct 10, 1987, Hilton Palacio del Rio, San Antonio

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
Oct 2, 1987, Dallas Marriott-Market Center, Dallas
Oct 9, 1987, Sheraton Tyler Inn and Towers, Tyler
Oct 13, 1987, Hillcrest Baptist Medical Center, Waco
Oct 14, 1987, Green Oaks Inn and Conference Center, Fort Worth
Oct 16, 1987, Marriott Hotel-Astrodome, Houston

CALENDAR OF MEETINGS ■Denotes Texas Meetings

SEPTEMBER

AMERICAN ASSOCIATION OF DIABETES EDUCATORS 14TH ANNUAL MEETING, Orlando, Fla, Sept 9-13, 1987. Contact Betty Lou Mobeck, AADE, 500 N Michigan Ave, Suite 1400, Chicago, IL 60611 (312) 661-1700

AMERICAN ACADEMY OF OTOLARYNGOLOGY: HEAD AND NECK SURGERY ANNUAL MEETING, Chicago, Sept 20-24, 1987. Sharon Crowel, 1101 Vermont Ave NW, Suite 302, Washington, DC 20005 (202) 289-4607

AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA ANNUAL MEETING, Montreal, Sept 10-12, 1987. Donald Gann, MD, Dept of Surgery, Rhode Island Hospital, 593 Eddy St, Providence, RI 02902 (401) 277-5321

AMERICAN COLLEGE OF RADIOLOGY ANNUAL MEETING, Seattle, Sept 12-17, 1987. Sheila Aubin, 1891 Preston White Dr, Reston, VA 22091 (703) 648-8900

■AMERICAN SOCIETY FOR SURGERY OF THE HAND/42ND ANNUAL MEETING, San Antonio, Sept 9-12, 1987. ASSH, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

■AMERICAN SOCIETY FOR SURGERY OF THE HAND/5TH ANNUAL RESIDENTS' AND FELLOWS' CONFERENCE, San Antonio, Sept 9-12, 1987. ASSH, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

■**TEXAS MEDICAL ASSOCIATION FALL CONFERENCE**, Austin, Sept 25-27, 1987. Contact Robert Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS PEDIATRIC SOCIETY ANNUAL MEETING, Houston, Sept 11-13, 1987. Contact Mary Greene, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

OCTOBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION ANNUAL MEETING, Orlando, Fla, Oct 18-23, 1987. Contact Fay Kaye, AAPMR, 30 N Michigan Ave, Suite 922, Chicago, IL 60602 (312) 236-9512

12TH ANNUAL INTERNATIONAL BODY IMAGING CONFERENCE, Maui, Hawaii, Oct 10-18, 1987. Contact Annual Body Imaging Conference, Dept of Radiology, Nu Med Regional Medical Center, 22141 Roscoe Blvd, Canoga Park, CA 91304 (818) 340-0580, ext 280

AMA NATIONAL CONFERENCE ON THE IMPAIRED HEALTH PROFESSIONAL, Chicago, Oct 8-11, 1987. Contact Janice Robertson, AMA Dept of Substance Abuse, 535 N Dearborn St, Chicago, IL 60610 (321) 645-5083

AMERICAN COLLEGE OF CHEST PHYSICIANS 53RD ANNUAL SCIENTIFIC ASSEMBLY, Atlanta, Oct 26-30, 1987. ACCP, Division of Education, 911 Busse Hwy, Park Ridge, IL 60068-2375 (312) 698-2200

■AMERICAN COLLEGE OF GASTROENTEROLOGY ANNUAL MEETING AND POSTGRADUATE COURSE, Dallas, Oct 24-28, 1987. Contact Garnder McCormick, ACG, 13 Elm St, Manchester, MA 01944 (617) 927-8330

AMERICAN CONGRESS OF REHABILITATION MEDICINE/AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION JOINT ANNUAL MEETING, Orlando, Fla, Oct 18-25, 1987. Contact Fay Kaye, Convention Manager, ACRM/AAPM&R, 130 S Michigan Ave, Suite 1310, Chicago, IL 60603 (312) 922-9366

AMERICAN DENTAL ASSOCIATION ANNUAL MEETING, Las Vegas, Oct 10-13, 1987. Contact Edward Jeske, ADA, 211 E Chicago Ave, Chicago, IL 60611 (312) 440-2657

AMERICAN DIETETIC ASSOCIATION 70TH ANNUAL MEETING, Atlanta, Oct 19-23, 1987. Barbara Mueller, Dept of Meetings, 430 N Michigan Ave, Chicago, IL 60611 (312) 280-5031

AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE ANNUAL CONVENTION, New Orleans, Oct 6-9, 1987. Barbara Hairfield, Director of Convention and Education Services, 4405 East-West Hwy, Suite 504, Bethesda, MD 20814 (301) 656-6117

AMERICAN PSYCHIATRIC ASSOCIATION INSTITUTE ON HOSPITAL AND COMMUNITY PSYCHIATRY ANNUAL MEETING, Boston, Oct 25-29, 1987. Kathleen Bryan, Director, Meetings Management, 1400 K St, NW, Suite 503, Washington, DC 20005 (202) 682-6100

AMERICAN SCHOOL HEALTH ASSOCIATION ANNUAL MEETING AND EXHIBITION, Indianapolis, Oct 6-10, 1987. Contact Dana Davis, ASHA, PO Box 708, Kent, Ohio 44240 (216) 678-1601

AMERICAN SOCIETY OF ANESTHESIOLOGISTS ANNUAL MEETING, Atlanta, Oct 10-14, 1987. Contact William Marinko, ASA, 515 Busse Hwy, Park Ridge, IL 60068 (312) 825-5586

■CARDIOLOGY AND CARDIOVASCULAR SURGERY: INTERVENTIONS, 1987 ANNUAL SYMPOSIUM CELEBRATING THE 25TH ANNIVERSARY OF THE TEXAS HEART INSTITUTE, Houston, Oct 7-10, 1987. Contact Debby Butler, Texas Heart Institute, PO Box 20269, Houston, TX 77225-0269

INTERNATIONAL FEDERATION OF PSYCHOANALYTIC SOCIETIES 5TH SCIENTIFIC CONFERENCE, New York, Oct 9-12, 1987. Contact Ann Turkel, MD, 350 Central Park West, New York, NY 10025 (212) 831-3400

SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS 38TH ANNUAL WORKSHOPS AND SCIENTIFIC MEETING, Los Angeles, Oct 26-31, 1987. Contact Marion Kenn, Director of SCEH, PO Box 2427, Liverpool, NY 13089-2427 (315) 652-7299

■SOCIETY OF TEACHERS OF FAMILY MEDICINE SOUTH CENTRAL REGIONAL MEETING, Houston, Oct 8-10, 1987. Marjorie Kraft, The University of Texas Medical School, 6431 Fannin, G.104, Houston, TX 77030 (713) 792-5346

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

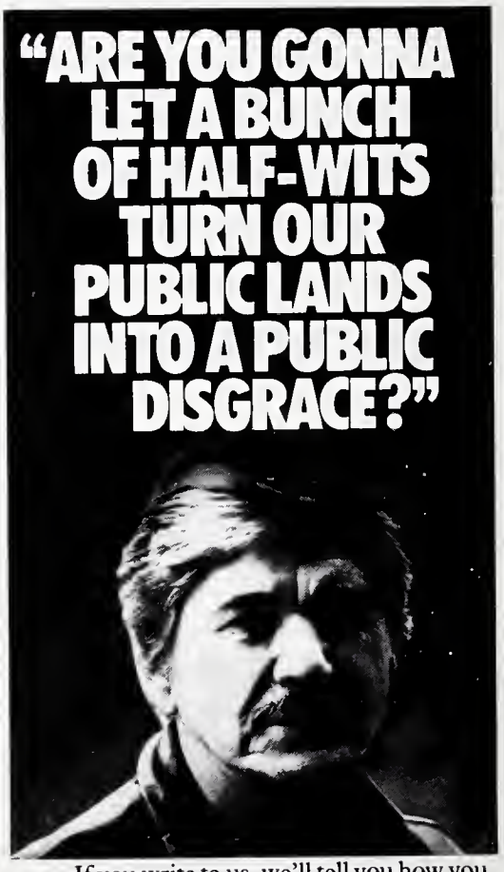
Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas



If you write to us, we'll tell you how you can help stop abuse of our public lands.
Write: Take Pride in America, P.O. Box 1339, Jessup, MD 20794.

BAD GUYS ABUSE PUBLIC LAND. GOOD GUYS SAVE IT.

Ad Council

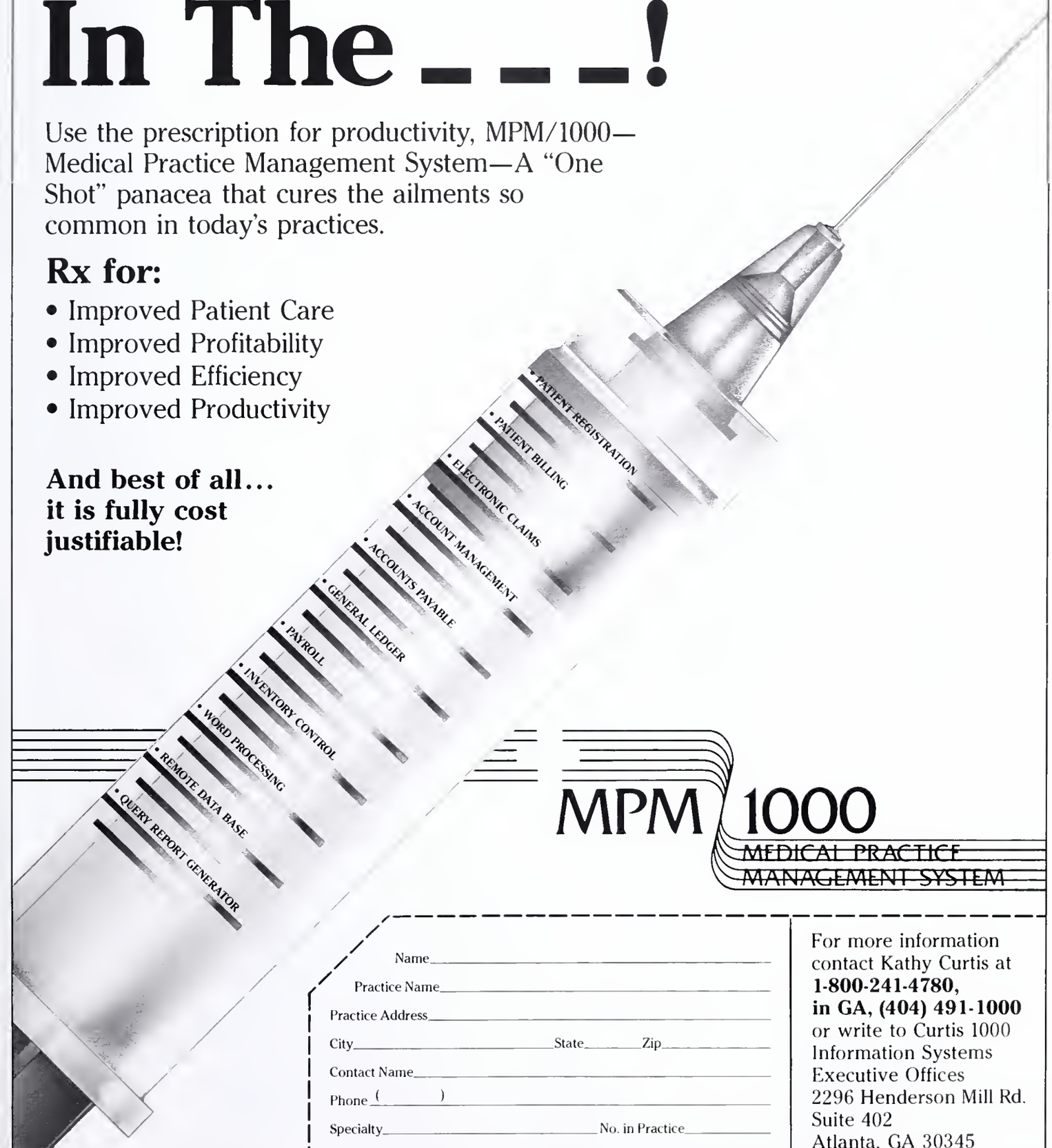
Give Your Practice A Shot In The _ _ _!

Use the prescription for productivity, MPM/1000—Medical Practice Management System—A "One Shot" panacea that cures the ailments so common in today's practices.

Rx for:

- Improved Patient Care
- Improved Profitability
- Improved Efficiency
- Improved Productivity

And best of all... it is fully cost justifiable!



MPM 1000
MEDICAL PRACTICE MANAGEMENT SYSTEM

Name_____

Practice Name_____

Practice Address_____

City_____ State_____ Zip_____

Contact Name_____

Phone ( )_____

Specialty_____ No. in Practice_____

For more information contact Kathy Curtis at **1-800-241-4780, in GA, (404) 491-1000** or write to Curtis 1000 Information Systems Executive Offices 2296 Henderson Mill Rd. Suite 402 Atlanta, GA 30345

S&W SCOTT&WHITE

Perinatal Outreach Education Program

- presents -

14th Annual

Perinatal Seminar

September 17-18, 1987

at

Scott and White

Temple, Texas

For more information or to register contact: Office of Continuing Medical Education, (817) 774-4073, Scott and White, Temple, Texas 76508.

Timberlawn Psychiatric Hospital

Established in 1917

Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223 214/381-7181

AGES IN
SECTIONS

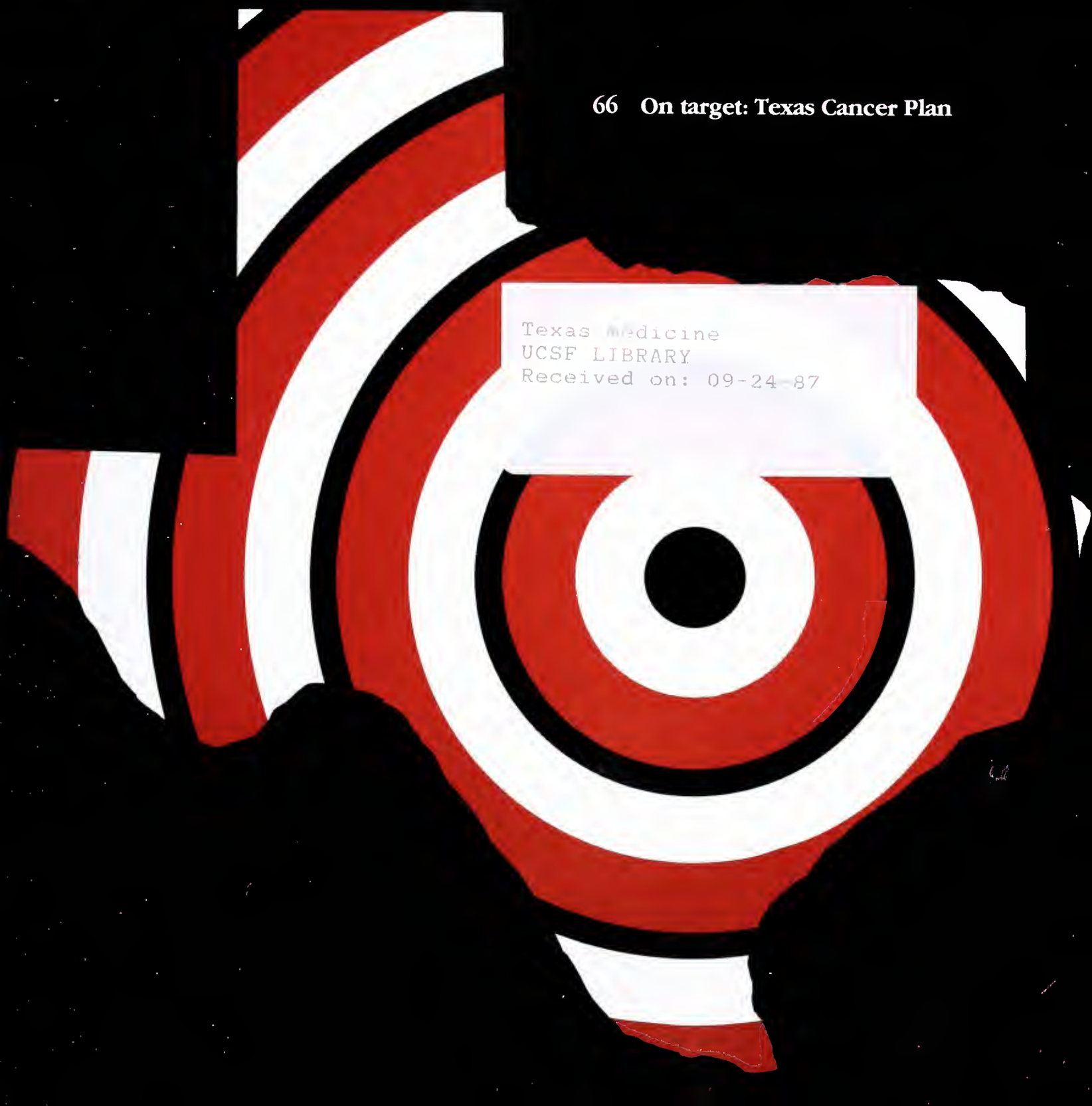
TION 1
TEMBER 1987

URRENT
REA

Texas Medicine

30 Health care spending in Texas
49, 55 Postconcussive syndrome
87 Medicine and the Law: Peer review update
Section 2 Oncology guidelines: your reference file

66 On target: Texas Cancer Plan



Texas Medicine
UCSF LIBRARY
Received on: 09-24-87

Our team includes you.

At Spring Shadows Glen, we consider the referring professional an integral part of the treatment team. We value your knowledge, skills and expertise, and encourage you to work directly with your patient throughout hospitalization. We coordinate and integrate your work with the care provided by our own experienced and dedicated staff, striving for the best treatment available for your patient. And we refer the patient back to you for follow-up services, upon discharge from Spring Shadows Glen.

Our comprehensive psychiatric hospital offers both inpatient and partial hospitalization programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. For additional information about the hospital, call Spring Shadows Glen.

Spring Shadows Glen
A Comprehensive Psychiatric Hospital
A Division of Memorial City Medical Center

2801 Gessner, Houston, Texas 77080 (713) 462-4000

MICHAEL R. SHARP
ATTORNEY

REPRESENTATION IN MATTERS OF PROFESSIONAL LICENSURE BEFORE THE TEXAS STATE BOARD OF MEDICAL EXAMINERS

SHARP, TACKETT & DAVIDSON,
A PROFESSIONAL CORPORATION
1680 One American Center • Austin, Texas 78701 • (512) 473-2265

Not certified by the Texas Board of Legal Specialization.
Certification is not currently available to anyone in this legal area.

See the difference in the first week[1]

- **Sleep improvement in 74% of patients after first h.s. dose[2]**
- **Significantly faster relief–62% of total four-week improvement evident in first week versus 44% with amitriptyline alone[1]**
- **Dramatic first-week reduction in somatic complaints[2]**

% Reduction in Somatic Symptoms[2]

- **Only ⅓ the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar[1]**

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Protect your decision.
Write "Do not substitute."

In moderate depression and anxiety

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

Copyright ©1987 by Roche Products Inc. All rights reserved.

References: 1. Feighner JP, *et al. Psychopharmacology 61*:217-225, Mar 22, 1979. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

Limbitrol* Ⓒ IV
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: *Double strength (DS) Tablets*, white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets*, blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500, Tel-E-Dose™ packages of 100, Prescription Paks of 50.

ROCHE®
ROCHE PRODUCTS INC
Manati, Puerto Rico 00701

PI 0585

The rewards of Limbitrol
You're both smiling again!
See the difference in the first week[1]
In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.[1]
In moderate depression and anxiety
Limbitrol®
Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) IV
Limbitrol® DS
Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) IV
ROCHE®
Please see summary of product information on adjacent page.

TexasMedicine

VOLUME 83 SEPTEMBER 1987

Contents

ARTICLES

30 Health care spending in Texas, 1975–1984
Charles E. Begley, PhD; Douglas A. Mains, MPA, MBA

41 Teenage childbearing trends in Texas
Peggy B. Smith, PhD; Laurilynn McGill, MPH

44 Emotional distress and psychosocial adaptation in cancer patients
Terry C. McMahon, MD

49 Postconcussive syndrome: an overview
Randolph W. Evans, MD

55 Representing your patients: legal aspects of postconcussive syndrome cases
Steve Waldman, JD

63 Physicians deaths: an analysis of the JAMA obituaries
Jack Hayes, PhD; Melanie Ann White, MS

66 Cancer update: Texas Cancer Plan: current profile and future directions
Joseph T. Painter, MD; Owen McCrory

Section 2 Oncology Guidelines Report

EDITORIALS

5 Texas Cancer Plan designed to control cancer
James D. Dannenbaum

6 Priapism—a medical emergency
Perry W. Nadig, MD

6 Correction

FEATURES

81 Wrap-up, part II: 70th Legislature postmortem
William G. Gamel, MD

84 "Mbotay, pasi wapi?" ("Hello, where does it hurt?")
Robert S. Van Hare, MD

MEDICINE AND THE LAW

87 Peer review update—new tools and requirements
Donald P. "Rocky" Wilcox, JD

PRACTICE MANAGEMENT

91 Techniques for improving your practice development
George S. Conomikes

NEWS

TMA in action

8 Fall conference convenes Sept 25–27 in Austin
8 Executive Board hears reports on legislation, peer review status
9 Boards, councils map TMA future at "Opportunity for Leadership"
9 Mr Mickey marks 20 years with association Sept 12

Health line

11 Study finds AIDS screening for cornea donors effective
11 Dallas physicians discuss children and AIDS
11 Medical examiners procure organs for transplantation
12 AABB center promotes autologous blood use

Socioeconomics

12 AMA advises physicians on MAAC discrepancies
12 AMA encourages societies to help Medicare's poor
14 HCFA clarifies PRO role in three activities
14 GAO report analyzes VA patient injury control

Capital comments

21 New law makes it illegal to drive while drinking
21 Mrs Bratcher receives award for political participation
21 Newsmakers

DEPARTMENTS

77 Clinical abstracts
80 Information for authors
93 Deaths
97 Medicine in literature
110 Continuing education directory

ON THE COVER

This month's cover features the Texas Cancer Plan, a product of the Legislative Task Force on Cancer in Texas, which is a targeted prescription for decreasing the burden of cancer in Texas. Joseph T. Painter, MD, and Owen McCrory describe the plan in "Texas Cancer Plan: current profile and future directions," beginning on p 66. James D. Dannenbaum, chairman of the Texas Cancer Council, gives a brief explanation of the plan in an editorial, "Texas Cancer Plan designed to control cancer," on p 5. Section 2, a special supplemental issue of *Texas Medicine* this month, contains guidelines for optimal cancer care developed by leading physician experts in Texas.

COMING NEXT MONTH

Scheduled for the October issue of *Texas Medicine* are articles on child sexual abuse, obstructive sleep apnea, Reye syndrome and juvenile rheumatoid arthritis, geriatric medicine, and the effect of maternal serum and milk zinc deficiency on the very low birth weight infant.

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso Chairman

Drue O. D. Ware, MD, Fort Worth Vice Chairman

J. Forrest Fitch, MD, McAllen Secretary

James M. Graham, MD, Austin
Harold R. High, MD, Cuero
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

David Vanderpool, MD, Dallas President

E. Ruhin Bernhard, MD, San Antonio Vice President

Val F. Borum, MD, Fort Worth President Elect

Betty P. Stephenson, MD, Houston Treasurer

Margie B. Peschel, MD, Fort Worth Secretary

Robert G. Mickey, Austin Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd, Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Shari Henson, Production Manager/ Editorial Assistant
Patty Illich, Administrative Secretary/ Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio Chairman
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701

Subscription rates, plus 7.25% state sales tax for Texas subscribers only, are: Members, $16 per year plus $1.16 sales tax; nonmembers and institutions, $20 per year plus $1.45 sales tax; foreign, $24 US currency; single copy, $2 plus $.15 sales tax.

Second class postage paid at Austin, Texas, and additional mailing office

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701.

Understanding the hows and whys of issues facing the medical profession—not just knowing what they are—enables you to take an informed, effective course of action.

TMA's Fall Conference will examine the rapidly changing environment faced by Texas' physicians, and the role of physicians in acting to protect or defend what is in the patient's best interest.

The program includes notable speakers, panel sessions, postgraduate courses, a Friday evening pre-conference marketing workshop, and a Sunday morning post-conference session on Medicare reimbursement.

Mark your calendar now and plan to attend Advocacy '87/Speaking Out on the Issues.

Texas Medical Association 1987 Fall Conference

Saturday, September 26, 1987
8:30 a.m.–5 p.m.
Hyatt Regency Austin

Texas Cancer Plan designed to control cancer

I want to thank the editors of *Texas Medicine* for the opportunity to share with you a brief glimpse of the Texas Cancer Plan, to call your attention to Cancer Update (p 66), which describes the plan, and the current special supplemental issue of *Texas Medicine* containing guidelines for optimal cancer care.

The Texas Cancer Plan is a detailed prescription for decreasing the burden of cancer in Texas. It is the product of the Legislative Task Force on Cancer in Texas (LTFCT), a group of 52 members and over 350 volunteers around the state who labored for several years to develop the plan. Appointed by Speaker of the House Gib Lewis, the task force developed both a short-term and long-term plan.

In very broad terms, the plan contains four goals:

1. Lower the risk for developing cancer;
2. Detect, diagnose, and treat cancer earlier when cure is more likely;
3. Improve the accessibility, availability, and quality of cancer resources, services, and programs in Texas; and
4. Advance control of cancer through development and application of new prevention, detection, diagnostic, and therapeutic methods and techniques.

Within the context of these goals, there are specific objectives and targeted activities for implementation.

One of the early recommendations of the LTFCT called for the creation of the Texas Cancer Council (TCC) to provide a central administrative focus for the fight against cancer in Texas and to coordinate the implementation of the plan, as well as monitor and update it. As a result, the TCC was created by the 69th Texas Legislature.

The involvement of the major health organizations in Texas was a key ingredient to keeping the task force on target with practical approaches to problems and effective utilization of the state's existing resources. Among these organizations were the Texas Medical Association, American Cancer Society, Texas Hospital Association, Texas Nurses Association, the health science centers around the state, the Texas Department of Health, and The University of Texas System Cancer Center M. D. Anderson Hospital and Tumor Institute. Joseph T. Painter, MD, and Owen McCrory provided key staff direction and overall guidance throughout the entire process.

The cooperation, resources, and expertise from these organizations and individuals were critical in the planning phase and are now even more important as the Texas Cancer Council implements the plan. One of the early indications of continued support from the Texas Medical Association (TMA) is our joint Physician Oncology Education Program. This initiative, given high priority by both the Texas Cancer Council and the TMA, is targeted to supplying additional oncology-related continuing education opportunities for physicians all around the state. This is a joint program about which both organizations are excited, and we hope you will participate as appropriate to your needs.

The overall role of the physician in the accomplishment of the plan's goals is of primary importance to the Texas Cancer Council and to the citizens of the state. Whether it be in prevention programs, such as informing the public about high-risk behaviors and suggesting appropriate changes; in screening, early detection, and treatment programs, such as teaching breast self-examination, scheduling regular Papanicolaou smears or regular proctoscopic examinations; in improving our existing cancer care programs, such as affiliation with hospitals that have approved American College of Surgeons Cancer Programs or helping to develop new ones; or in cancer research initiatives, the role of the physician is clear. Your continued help in the battle is desperately needed.

In this month's Cancer Update, Painter and McCrory will share with you the development of the Texas Cancer Plan. Their article reports on the LTFCT process, highlights the substantive aspects of the plan, identifies the key strategies for successful implementation, and provides some likely policy directions for cancer control in Texas. I recommend this article to all those with an interest in cancer in Texas.

Finally, I want to call to your attention the accompanying Section 2 of *Texas Medicine* containing guidelines for optimal cancer care. These guidelines were developed by leading physician experts in Texas who gave generously of their time and energy in order to produce the necessary consensus to support such a thorough document. This effort was envisioned as serving a number of purposes:

1. To improve quality of care for all Texans with cancer;
2. To encourage networking of physicians, facilities and cancer resources;
3. To serve as measures of the adequacy of cancer resources and services;
4. To serve as a curriculum for the training and education of physicians; and
5. To serve as a planning tool for facilities developing cancer programs.

In addition, the guidelines are part of a longitudinal physician education effort in cancer prevention, detection, and treatment from medical school through continuing education. The work was organized around the following eight groups: head and neck, lung, breast, colorectal, pediatric, gynecology, hematology, and urology. The sites covered by these guidelines incorporate over 75% of all cancer cases and all the common cancers.

The publication of these guidelines is being sponsored by the Texas Cancer Council, the American Cancer Society, Texas Division, and the Texas Medical Association. We hope you will read this special section of *Texas Medicine* and share your thoughts with the chairman of each group regarding future editions of the guidelines and how they can better meet your patients' needs.

JAMES D. DANNENBAUM
Chairman, Texas Cancer Council, Capitol Station, Box 12097, Austin, TX 78711.

Priapism—a medical emergency

Priapism, a persistent, often painful erection unrelated to sexual desire, was until recently a rare disease of obscure etiology whose treatment was empirical, always difficult, and often unsatisfactory. Now new understanding of the physiology and pharmacology of erectile function is pointing to more rational treatment of priapism. But ironically this knowledge is also increasing the incidence of priapism.

We now know that in response to neural stimulation neurotransmitters are secreted within the corpora cavernosa, causing the corporal smooth muscle to relax, and allowing its sinusoids to fill with blood, making the penis tumescent. These neurotransmitters also dilate the penile artery, and as the pressure within the corpora rises to mean arterial pressure, the penis becomes rigid. As in other physiological systems, pharmacologic manipulation can mimic or counteract these effects. But in the penis, unlike most other organs, the target muscle and arteries are bathed in blood in a semi-closed compartment where administration of a small amount of drug can result in high local concentration. Direct injection into the corpora permits the use of drugs whose cost or systemic effect precludes other routes of administration.

Papaverine, a smooth muscle relaxant and vasodilator, causes an erection when injected into one corpus cavernosum (there is cross circulation) if the arteries are normal and if the mechanism of venous outlet obstruction, a passive phenomenon, is intact. Alpha adrenergic blocking agents (phentolamine mesylate, phenoxybenzamine hydrochloride) and prostaglandin E-1 do the same thing. Alpha agonists (epinephrine, norepinephrine) reverse this action.

Research and practice have both benefited from this knowledge. We can study human erections in the laboratory. We can treat priapism pharmacologically. Alpha adrenergic agents, if injected into the corpus cavernosum soon after the onset of priapism, will reverse the process by increasing corporal smooth muscle tone and constricting the penile artery. But later this vasoconstriction itself becomes hazardous. As hours pass, oxygen tension falls, and necrosis impends.

We can also permit some impotent men to use pharmacological erection regularly for sexual activity. Is this the dawn of a new age for the impotent? Not quite. Lacking the body's physiological fine tuning, a pharmacologic erection may last hours, even days; long-term safety is unproven; the effective dose of the drugs is unpredictable. The minimum amount of a drug required to cause an erection, generally consistent in any one man, varies widely among individuals. A small increment in the dose of the drug may mean the difference between an erection lasting 90 minutes and one lasting many hours. Pharmacologic erection gradually becomes pathologic erection. After some hours of stasis of the blood within the corpora, its oxygen saturation decreases and viscosity increases. Tissue damage and fibrosis follow. Impotence often results, pharmacologic erection no longer works, and implantation of a penile prosthesis is difficult.

As pharmacologic erection gains popularity with the public and the medical profession, more and more men will appear in clinics and emergency rooms with priapism. This complication will sometimes occur among men in even the most carefully monitored home injection programs. Beyond this, pharmacologic erection will be misused. Like other pleasure-producing pharmacologic phenomena, its lure will irresistibly tempt some, perhaps many, men to experiment with the technique without proper indications or adequate supervision.

A harbinger of this problem recently appeared in San Antonio. The patient's erection had lasted 48 hours before he called the doctor. A friend had been using papaverine for pharmacologic erection. The man himself had no problem with his erections, but was curious and wanted to experiment, so, borrowing his friends' papaverine and syringe and needle, had injected himself. Too late for pharmacologic treatment, he required a caverno-spongiosum shunt to relieve his problem. At least one similar case has been reported (1).

Some orally administered drugs, trazodone for example (2), can also cause priapism and will further increase the number of cases we see.

What can we do? Practice good medicine. Pharmacologic erection programs should be supervised by urologists experienced in the evaluation and treatment of impotent men and able to deal with its complications. Physicians should recognize priapism as an emergency and promptly refer patients to specialists competent to treat them. The public must be warned of the hazards of misguided experimentation. Priapism must be taken seriously. It is certainly no joke.

PERRY W. NADIG, MD
Clinical Professor of Urology, The University of Texas Health Science Center, 561 Metropolitan Professional Bldg, San Antonio, TX 78212.

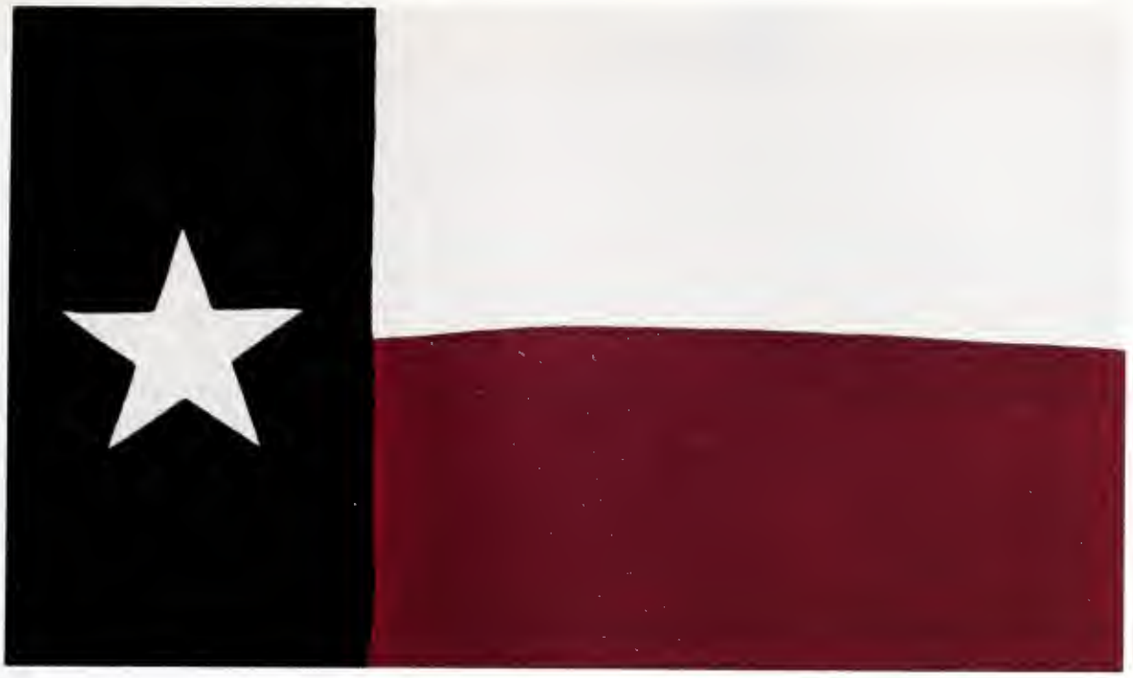
REFERENCES

1. Halsted DS, Weigel JW, Noble MJ, et al: Papaverine-induced priapism: two case reports. J Urol 136(1):109–110, 1986.
2. Priapism with trazodone (Desyrel). Med Lett Drugs Ther 26(658):35, 1984.
3. Lue TF, Takamura T, Schmidt RA, et al: Hemodynamics of erection in the monkey. J Urol 130(6):1237–1241, 1983.
4. Lue TF, Hellstrom WJ, McAninch JW, et al: Priapism: a refined approach to diagnosis and treatment. J Urol 136(1):104–108, 1986.

Correction

Part of a scientific article ("Emotional distress and psychosocial adaptation in cancer patients," by Terry C. McMahon, MD) was omitted from the August issue of *Texas Medicine*. The editors regret this omission and have opted to reprint the article in its entirety. It begins on page 44 of this issue.

State flag of Texas



Flag It.

To complete your prescription,
be sure to sign on the right,
on the "Dispense As Written" line.
This "flags" both pharmacist and patient
that you want the *brand* to be dispensed.
And it protects your decision.

VALIUM®
brand of
diazepam/Roche®

scored tablets

2 mg 5 mg 10 mg

The one you know best.

The cut out "V" design is a registered trademark of Roche Products Inc.

Copyright © 1987 by Roche Products Inc.
Manati, Puerto Rico 00701. All rights reserved.

ROCHE®

TMA IN ACTION

Fall conference convenes Sept 25–27 in Austin

Experts will examine medicine's condition during "Advocacy '87/Speaking Out on the Issues," Texas Medical Association's fall conference, Saturday, Sept 26, at the Hyatt Regency in Austin. Seminars, workshops, and courses before and after the conference offer an extended weekend of learning opportunities.

Saturday's program at the Hyatt Regency features American Medical Association President-Elect James E. Davis, MD, Durham, NC, and other notable speakers discussing issues affecting the profession. A panel discussion of the results of the 70th session of the Texas Legislature features Senators Chet Brooks and John T. Montford and Representatives Brad Wright and Mike McKinney, MD. A second panel will focus on "Advocating for the Economic Health of Your Practice."

Also scheduled Saturday is the first Philip R. Overton Annual Lectureship in Medicine and the Law, presented by Terry O. Tottenham, JD, LLM, Austin. Mr Tottenham will discuss "PPO, HMO, and Insurance Restrictions on Patient Treatment Choices: The Physician's Role." The lectureship honors the late Philip R. Overton, TMA's general counsel for more than 30 years and a recipient of the association's Special Award for Distinguished Service.

AMA President-Elect James E. Davis, MD, will speak during TMA's fall conference, Sept 26, in Austin.

Scheduled concurrently with the Saturday conference are meetings of the medical student, resident, and young physicians' sections. The TMA Medical Student Section will meet from 1 to 5 pm at the Embassy Suites Hotel, beginning with a program on the medical malpractice crisis. Also at the Embassy Suites from 1 to 5 pm will be the TMA Resident Physician Section. Following a business meeting, the RPS will conduct a forum on housestaff organization. The Young Physician Steering Committee will sponsor an open forum on young physician concerns from 1 to 3 pm in the Panhandle Room of the Hyatt Regency Hotel.

Saturday's agenda for fun includes a buffet luncheon at the Hyatt Regency, which is available at a cost of $10; a reception hosted by the Pruco Life Insurance Company of Texas, a subsidiary of The Prudential Insurance Company of America, underwriter, TMA Insurance Program; and a gridiron faceoff between The University of Texas and Oregon State.

A pre-conference workshop, "More on Marketing Tips for a Successful Practice," features Jeffrey J. Denning of Conomikes Associates, Inc, and is offered Friday, from 7 to 9:30 pm at the Hyatt Regency. Rogers K. Coleman, MD, vice president and medical director of Blue Cross and Blue Shield of Texas, and Harold Whittington, president of Harold Whittington & Associates, will present a post-conference session on "Keeping Ahead of the MAAC" Sunday, Sept 27, from 8:30 to 11 am, also at the Hyatt Regency. Both sessions are offered free of charge, but pre-registration is suggested.

Additionally, four postgraduate courses will be presented at the Four Seasons Hotel during the week-end. "Basic Life Support for Physicians" will be presented Saturday, Sept 26, from 1 to 5 pm for a fee of $40 for TMA members. Three courses will be presented concurrently on Sunday, from 8 am to 1 pm: "Advances in Lipid Drug Therapy," "Current Trends in Urology," and "Imaging Selection." Each of the Sunday courses has a $75 member registration fee. The deadline for registration for the courses is Sept 25.

Executive Board hears reports on legislation, peer review status

"There will be no taxes on your medical services, nor on your health or liability insurance premium." William G. Gamel, MD, chairman of the Council on Legislation, emphasized these and other positive results of the Second Called Session of the 70th Texas Legislature in his report to the Executive Board on July 26 in Houston.

The Texas Medical Association enhanced its reputation and credibility during this session, he said, even though legislation for tort reform probably will be a more lengthy and complex undertaking than was anticipated. A summary of legislative achievements and ongoing projects appears elsewhere in this journal (p 81).

In other business, the board acted on five resolutions submitted by the Hospital Medical Staff Section:

1. Adopted was a resolution that TMA inform its members of current Medicaid review activities and the potentially devastating ramifications of this peer review program. The resolution also called for TMA to communicate with the National Heritage Insurance Company to insure that fair and equitable standards and procedures in its peer review processes be developed, published, and widely disseminated, and to continue to support the highest quality in both patient care and peer review processes for the Medicaid program.

2. Also adopted was a resolution that TMA notify its members of its concerns about signing the "Payment Plan Agreement" developed by Blue Cross and Blue Shield until that organization clarifies the program's benefits, limitations, and restrictions regarding the physician's participation.

3. In a third resolution, the Executive Board expressed sincere appreciation and gratitude to Congressmen Beau Boulter, Amarillo; Charles Shenholm, Stamford; Ralph Hall, Rockwall, and other Texas congressmen who have voiced concern for the plight of rural physicians and hospitals.

4. A resolution to endorse the concept of a voluntary poll of physicians who could serve as locum tenens for rural physicians needing qualified coverage for their practices was referred for study.

5. A resolution calling for a study of the implementation of the federal and state laws regarding procurement of organs for transplantation, expressing concern that implementation should not place an undue burden on physicians or nurses at the interface of care with the critically ill, requesting that the burden be shared with others, and asking that the many complexities of fulfilling the statutory requirements not be overlooked, was referred to the Council on Scientific Affairs.

Board members were informed of the Texas Delegation's impact on actions of the AMA House of Delegates at the June annual meeting (see the August 1987 issue of *Texas Medicine*, p 9).

Reporting accomplishments of the TMA Physician Advocacy Committee, Chairman Nancy Dickey, MD, mentioned congressional support for due process improvements, relief measures to achieve more equitable treatment for rural physicians, changes in the PRO quality assurance protocol, appointment of a Texas Medical Association/Texas Medical Foundation Liaison Committee, a series of changes in procedures reflected in the revised PRO manual, and the advocacy committee's 29 recommendations for improving the PRO process (see the July 1987 issue of *Texas Medicine*, pp 61–62).

In addition, the advocacy committee is looking into the possibility of having some disputed cases reviewed by other representative physicians in the area, perhaps using "Protocol for Peer Review in Smaller Institutions," developed by the TMA Board of Councilors and approved by the TMA House of Delegates in 1983.

In his report to the Executive Board, TMA President David Vanderpool, MD, made three recommendations with regard to TMA and TMF:

1. That recommendations of the Physician Advocacy Committee adopted at the May 1987 House of Delegates meeting be reviewed by TMF and implemented with the assistance of TMA, as appropriate, as soon as possible.

2. That TMA evaluate its current relationship with TMF, with particular attention to TMF's board size and composition with respect to consistency of TMF policies with TMA policies regarding the PRO process in Texas.

3. That TMA leadership communicate with TMF leadership to discuss these recommendations.

These recommendations were approved.

Boards, councils map TMA future at "Opportunity for Leadership"

The key objective of the Texas Medical Association is to improve the health of Texans through professional and personal development of member physicians. With that in mind, the officers, board and council chairmen, and staff gathered in Houston July 25 for the first "Opportunity for Leadership" orientation and planning session. Representatives of the TMA Auxiliary and members of the TMA Delegation to the AMA also attended.

As part of the framework for developing a formal TMA planning process, the Board of Trustees, sponsors of the session, established the following key strategies:

1. Increase the visibility of the association while enhancing the reputation of TMA and its members.

2. Exemplify excellence in every activity.

3. Change to a market-driven approach based on need.

4. Develop a sharper focus for activities by reorganizing structure and process.

The four major focus areas for the association are education, representation, standards, and organization.

Using that framework, board and council chairmen began planning specific activities, and budgeting for them, so as to provide the maximum support and promotion for the organization's main objective.

This was the first time in TMA's history that members of the association's leadership had met for the sole purpose of planning for the future and communicating with each other about those plans.

"We must have a clear vision of the future," Dr David Vanderpool emphasized in his opening remarks. "We're a new Texas Medical Association, and we need to look ahead and plan. We need a new organizational emphasis; councils will work together to accomplish our common goals. In everything we plan and do, only two things are important: Are we serving our members? Are we being creative and innovative in our thinking and our work?"

Mr Mickey marks 20 years with association Sept 12

Robert G. (Bob) Mickey, Texas Medical Association's executive vice-president, marks his 20th anniversary with the association Sept 12, 1987. The association's Board of Trustees appointed Mr Mickey chief executive officer at the beginning of 1987.

Mr Mickey joined TMA as the first executive director of the Texas Medical Political Action Committee (TEXPAC). He subsequently served for ten years as director of TMA's management division and provided executive assistance to the Texas Delegation to the American Medical Association and to the Council on Constitution and Bylaws.

Bob Mickey, TMA's executive vice-president, joined the staff Sept 12, 1967.

Quality does not just happen...

ABOUT YESTERDAY

Since 1955, your Texas Medical Association has sponsored an Insurance Program as a service to its members. It is a responsibility your Association takes seriously. The Program's primary goal has always been—to provide the best coverage at the lowest possible cost. Through the years, the Program has been expanded to meet the needs of its members. This has resulted in the advanced offerings we have today.

ABOUT TODAY

And today, we doubt if your Program can be beat. The cost, in relation to benefits, makes your Program "the Competition." Of course, a good program without good service is of no value to its members. That is why your Association has a salaried staff working to assist you. The staff works in your best interest—whether it concerns enrollment, service or claims.

...AND TOMORROW

The Insurance Trust maintains an independent actuary to advise and guide us. As inflation continues to rise, maximums have been increased to cope with tomorrow's insurance requirements. We are planning with accountability to you in mind. Even though we cannot solve all the problems that arise in a given period of time, we think our efforts prove—we are always working in your best interests.

Your Committee on Association Insurance Programs meets at least three times annually to carefully analyze premium income, claim payments, reserve funds, enrollment and service. As we strive to serve you, you can help by giving us your comments—questions—suggestions. Call or write—better yet, attend one of our meetings. All lines of communication are open.

Committee on Association Insurance Programs
Ronold J. Pinkenburg, M.D., Chm.
Robert A. Dennison, M.D.
Albert E. Gunn, M.D.
Charles F. Hendler, M.D.
Lorry J. O'Brien, M.D.
Shirley Molenich, M.D.
Pedro DeLeon, M.D.
Henry A. Dunzi, M.D.
James R. Sowyers, M.D.
Mrs. Thomas G. Gloss, Aux. Rep.

for information, contact

TEXAS MEDICAL ASSOCIATION INSURANCE PROGRAM

1901 NORTH LAMAR BOULEVARD AUSTIN, TEXAS 78705
CALL TOLL FREE: 1-800-252-9318

- *Long Term Disability Income*
- *Life Insurance*
- *Major Medical*
- *Office Overhead*
- *Personal Accident*

underwritten by

PRUCO LIFE INSURANCE COMPANY OF TEXAS
A Subsidiary of The PRUDENTIAL

Study finds AIDS screening for cornea donors effective

A research team of ophthalmologists from Johns Hopkins University has concluded a study to determine the reliability of techniques used by the major US eye bank network to screen the cornea donor supply for the AIDS virus. The study, which appeared in *Ophthalmology*, found the tests to be 94% to 99% effective in screening prospective cornea donors.

The report, by ophthalmologist Jay Pepose, MD, and colleagues, compared postmortem test results of eye fluid (aqueous humor) and blood samples from 35 AIDS patients, 45 people considered at high risk of carrying the AIDS virus, and 262 people whose medical histories revealed no risk factors associated with the disease.

Although the AIDS virus has been detected in tears and corneal tissue of carriers of the disease, no cases of AIDS transmission by corneal transplantation have been reported, Dr Pepose said.

The researchers found that ELISA (enzyme-linked immunosorbent assay) testing of eye fluid alone is not sufficient because a natural barrier exists between the blood system and eye structure, which seems to limit or prevent detectable levels of AIDS antibodies from entering the eye.

The study found three AIDS-infected individuals among the 262 people considered to be at no known risk. In addition, AIDS antibodies, which indicate exposure to the AIDS virus, were detected in blood samples from only 4% of high-risk cadavers originating from the Los Angeles area where a high prevalence of AIDS exists. However, positive antibody tests were found in 30% of high-risk cadavers from the Maryland area, which has fewer reported AIDS cases.

"These results indicate that you can't take anything for granted," said Dr Pepose. "Donated organs and tissues must receive careful blood screenings, even if they're from low-risk groups or from areas with few or no AIDS cases. This method of testing is especially important since complete medical histories may not be available at the time of death."

The study's findings substantiate the policy adopted by the Eye Bank Association of America (EBAA) to perform ELISA blood screening of *all* donors before releasing the tissue for transplantation.

Dallas physicians discuss children and AIDS

To answer the community's questions about AIDS' real and imagined risks to children, the Children's Medical Center of Dallas presented an education conference, "The Facts About Kids and AIDS."

At least 475 children across the country have been diagnosed with AIDS, according to the Centers for Disease Control. In addition to an uncertain future, these children face ostracism in the schools and other social settings. Charles Ginsburg, MD, the Robert L. Moore Professor of Pediatrics at The University of Texas Southwestern Medical School and medical director of Children's Medical Center of Dallas, thinks that isolation is not a legitimate precaution. "There's been a great deal of unjustified paranoia and misinformation about this disease and its potential impact on our children," Dr Ginsburg said.

Dr Ginsburg and several other Children's Medical Center physicians addressed questions during the conference. The audience was composed of press members, school officials, PTA leaders, and other concerned parties.

The conference's first presentation, by Richard Wasserman, assistant professor of pediatrics and microbiology at The University of Texas Southwestern Medical School in Dallas, tracked the progression of the AIDS virus in children. Dr Wasserman delineated ways in which the potentially lethal disease can and cannot be transmitted.

George H. McCracken, Jr, MD, professor of pediatrics, division of infectious diseases at the medical school, focused on AIDS in day care centers and schools, raising such issues as whether children with AIDS pose a threat to classmates, what kinds of contact are required to spread AIDS, and the school's responsibilities both to AIDS victims and to the public at large.

Other presentations included the subject of blood transfusion in the spread of AIDS among children by George Buchanan, MD, director of hematology/oncology division at Children's Medical Center and professor of pediatrics at the Dallas medical school, and the issue of AIDS testing among children, presented by Joe Rutledge, MD, associate professor of pathology.

Videocassettes of the conference may be ordered by calling the Kids and AIDS Hotline, (214)920–2167.

Medical examiners procure organs for transplantation

The Texas Society of Pathologists surveyed Texas county medical examiners to learn how many organs and tissues they procured for transplantation during 1986.

Queries were sent to 12 medical examiners, and five responded. These departments accessioned 14,588 cases; organs were procured from 3,644 (25%). The raw data are summarized in the accompanying table.

There was considerable variation in reports from the responding medical examiners' offices. Analysis of the reasons for the dissimilarity may provide useful information for the future.

William T. Hill, MD, chairman of the TMA Council on Scientific Affairs, notes that beginning Jan 1, 1988, Texas law will require that each hospital develop its own organ procurement protocol.

A helpful packet of materials is available on request from the Council on Scientific Affairs, c/o William T. Hill, MD, 1801 N Lamar Blvd, Austin, TX 78701.

Number of tissues and organs procured by Texas county medical examiners during 1986.

Tissue/Organ	No. Procured
Cornea	3,462
Bone & connective tissue	289
Skin	152
Heart	72
Kidney	182
Lung	1
Liver	35
Pancreas	16
Heart valves	4

AABB center promotes autologous blood use

The American Association of Blood Banks (AABB) has established a National Autologous Blood Resource Center (NABRC). The center will promote the use of preoperative deposit of autologous blood and the intraoperative and postoperative salvage of shed blood. The use of autologous blood has been endorsed by the Council on Scientific Affairs of the American Medical Association.

The NABRC has developed pamphlets on predeposit blood donation for patients, physicians, and allied health personnel, and a brochure for physicians addressing intraoperative and postoperative blood salvage. Detailed protocols for establishing these services in hospitals and blood centers also are available from the resource center.

Further information about the AABB National Autologous Blood Resource Center is available by writing or calling Ms Lieta Maffei, MT(ASCP)SBB, Autologous Blood Specialist, AABB National Office, 1117 N 19th St, Suite 600, Arlington, VA 22209; (703)528–8200. Specific inquiries will be answered by Ms Maffei or referred to physicians on the AABB Autologous Transfusion Committee. Pamphlets and protocols are available without charge by writing to the center at the AABB national office.

"We're putting your condition to a vote, Senator. We'll have a decision after our holiday break."

SOCIOECONOMICS

AMA advises physicians on MAAC discrepancies

The American Medical Association advises physicians having problems with Medicare's maximum allowable actual charge (MAAC) policies to communicate directly with the appropriate carrier, and if necessary, with the Health Care Financing Administration. In a separate action, the vice president and medical director of the Texas Medicare carrier has announced that the company will be reviewing MAAC charges and informing physicians whose charges are at variance with their MAACs.

Texas physicians may direct inquiries to Blue Cross and Blue Shield of Texas, PO Box 660156, Dallas, TX 75266-0156, phone (214) 669-7408. If problems cannot be solved at that level, physicians should contact the Regional Administrator, HCFA, 1200 Main Tower, Dallas, TX 75202, phone (214)767–6423.

Physicians electing to be "nonparticipating" (ie, those who do not accept assignment on all claims) in the Medicare program are subject to the MAAC limit on each service they provide to Medicare beneficiaries. Because Medicare carriers were not required to provide nonparticipating physicians information on their MAAC limits until after the deadline for deciding whether to participate, some physicians calculated their own MAACs with instructions and forms provided by the AMA.

Subsequently, the association's Council on Medical Service has learned that in a number of cases, MAACs that carriers calculated differed substantially from the MAACs that physicians calculated. A report from the council to the AMA House of Delegates explains that there are at least three possible reasons for such discrepancies:

Carriers used the *median* of physician charges during the 1984 base period in calculating the MAAC for each service. However, many physicians may have used the *weighted average* of such charges in their own calculations (as they are allowed to do) to eliminate or minimize any rollback of their allowable charges during 1987. Carriers are required to recognize a MAAC based on either figure.

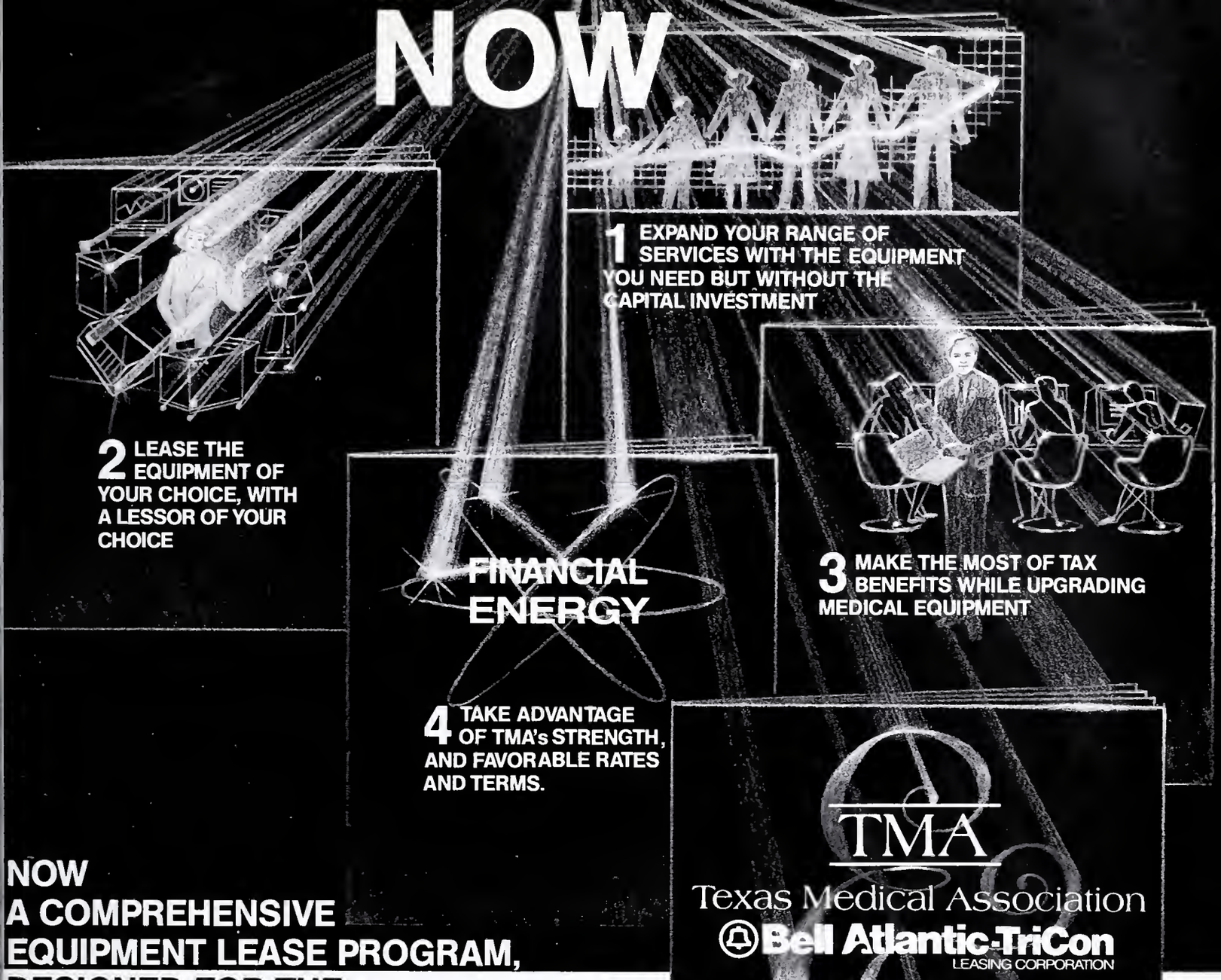
The carrier may have been unaware that the physician had charges for a particular service during the base period and accordingly has set the MAAC for that service at the 50th percentile of the customary charges for that service by nonparticipating physicians, as required by the law. In addition, it has been reported that some carriers are erroneously requiring *three* charges to compute the MAAC for a particular service. While three charges are required to establish a physician's customary charge profile, one charge during the base period is sufficient for purposes of calculating a MAAC.

A discrepancy may have resulted from coding errors involved in the carrier's conversion to the AMA's CPT-4 procedural coding system, or from simple errors in recording charges during the base period.

Rogers K. Coleman, MD, vice president and medical director, Blue Cross and Blue Shield of Texas, Inc, appearing before Texas Medical Association's Council on Socioeconomics in May, announced that carriers have been instructed to compare the weighted average of nonparticipating physicians' Medicare charges with the published MAAC reports. The first compliance letters were to have been mailed in July. TMA has learned, however, that the carrier is evaluating several versions of the letter and at press time did not anticipate a mailing before September. If upon completion of the comparisons, the carrier determines that there is some variance in the MAAC, ie, the weighted average exceeds the MAAC, letters to physicians will convey the carrier's determination. The letters will list the procedures for which the carrier has identified MAAC violations. Physicians can request the particular claim number and/or date of service under dispute and respond to the allegation.

AMA encourages societies to help Medicare's poor

The American Medical Association has encouraged state and local medical societies to continue programs that help


NOW
1 EXPAND YOUR RANGE OF SERVICES WITH THE EQUIPMENT YOU NEED BUT WITHOUT THE CAPITAL INVESTMENT
2 LEASE THE EQUIPMENT OF YOUR CHOICE, WITH A LESSOR OF YOUR CHOICE
FINANCIAL ENERGY
3 MAKE THE MOST OF TAX BENEFITS WHILE UPGRADING MEDICAL EQUIPMENT
4 TAKE ADVANTAGE OF TMA's STRENGTH, AND FAVORABLE RATES AND TERMS.
TMA
Texas Medical Association
Bell Atlantic-TriCon
LEASING CORPORATION

NOW A COMPREHENSIVE EQUIPMENT LEASE PROGRAM, DESIGNED FOR THE TEXAS MEDICAL ASSOCIATION

Expect extra dimensions like these:

Pay as you earn. Use the revenue that your new equipment generates to make your monthly lease payments. Save your equity capital for other uses. Acquire the medical or office equipment that you need, expand the range of your services, and increase profits, without the capital investment.

Conserve capital. Use your capital freed by exercising the lease option for assets that appreciate rather than depreciate. Real estate or a Keogh account, for example.

Special rates and terms. Because of the endorsement, Bell Atlantic TriCon is providing TMA members with special rates, terms and credit conditions. On transactions less than $25,000 for physicians in practice three years or more, Bell Atlantic TriCon will not require financial statements.

Additional credit lines. Your new line of credit with Bell Atlantic TriCon will enable you to conserve your bank lines for patient accounts receivable/insurance receivable financing or other short term working capital needs.

100% financing. Finance 100% of the cost to acquire the equipment you need to manage your business or provide additional patient services. Financing can include consulting fees, software costs, training, freight, leasehold improvements and shipping. Avoid a large down payment.

Fixed rate, long term financing. With interest rates starting to climb, this is an excellent time to lock in a monthly payment based on today's low special TMA rates.

Guaranteed purchase options. While you enjoy protection from obsolescence, you also have an agreed upon purchase option price should you elect to own the equipment.

Tax benefits. Investigate with your accountant how the benefits of leasing will apply to your practice.

Financial energy. Bell Atlantic TriCon, part of Bell Atlantic Capital Corp., has the financial strength and desire to meet all your leasing requirements, no matter how extensive or modest.

Choose carefully. Make sure the same care that goes into your equipment selection process goes into your selection of a finance source.

Applications accepted by phone.

For further information on the TMA *easy to use* program—contact Mike Stephen at 1-800-635-4023 or TMA member services at 512-477-6704.

Bell Atlantic TriCon
6565 West Loop South
Bellaire, Texas 77401

physicians identify low-income Medicare beneficiaries in need of financial assistance. "Nonparticipating" physicians traditionally have assisted these beneficiaries by accepting assignment or waiving copayments or deductibles on a case-by-case basis.

During their annual meeting in June 1987, the AMA House of Delegates approved a report from the Council on Medical Service, which describes state and local society programs that help physicians identify Medicare beneficiaries who need financial assistance. "Typically, these programs involve a cooperative effort between a local medical society and a local senior citizen organization," the report states. "The senior citizen organization usually verifies a beneficiary's financial need for such special payment arrangements, based on an application from the beneficiary, and presents those qualified with a special card endorsed by the medical society. The medical society usually encourages the cooperation of member physicians in the program and compiles a list of physicians agreeing to accept assignment upon presentation of the card."

Recognizing that the Health Care Financing Administration may construe routine waivers as a reduction of the physician's usual charges, which warrants a reduction in the physician's customary charge profile, the AMA report cautioned: " . . . it is extremely important for any physician who is contemplating such case-by-case waivers to discuss any proposed waiver practice with the carrier. Assurance should be obtained that this practice will not affect fee profiles or create a risk of sanctions. This is particularly true for physicians with a significant number of patients meriting such arrangements."

The report observed that case-by-case acceptance of assignment or waivers of copayments and deductibles will provide temporary relief for low-income beneficiaries while the association works toward comprehensive reform of health care financing for the elderly.

HCFA clarifies PRO role in three activities

Recent instructions from the Health Care Financing Administration to peer review organizations clarify the PRO's role in implementing "anti-dumping" regulations, reviewing "hospital continued stay notices of noncoverage," and reviewing proper lithotripsy codes.

According to HCFA, PROs may be asked to provide medical consultation in state agencies' investigations of complaints regarding the inappropriate transfer of patients. HCFA's action is part of the administration's implementation of the "anti-dumping" provisions of the Consolidated Omnibus Reconciliation Act of 1985 (COBRA). According to Regional PRO Letter 87–23, the measure requires that " . . . participating hospitals with emergency departments provide, upon request, and within the hospital's capabilities, medical screening examinations and treatments for women in active labor and individuals (including non-Medicare beneficiaries) with emergency medical conditions, or to arrange appropriate transfer of the patient to another medical facility unless the patient or the legal representative of the patient refuses treatment or transfer."

HCFA also has clarified the PROs' obligation to solicit patient views in the review of a situation where a hospital determines that Medicare does not cover continued hospitalization. Regional PRO Letter 87–25 addresses the question of whether a PRO is required to solicit patient views if the patient already has left the hospital. The letter concludes, " . . . we believe the intent of Congress was to provide for the PRO to solicit the patient's view whenever he/she requests review of a hospital continued stay notice of noncoverage." The letter explains that such a review must be done within three working days of receipt of the request if the patient is in the hospital. If the patient has left the hospital, he or she has 30 days from the date of the notice of noncoverage to request a review.

A third letter addresses some PROs' failure to review lithotripsy codes. The letter instructs PROs to review cases of percutaneous lithotripsy in hospitals with an extracorporeal shockwave lithotriptor (ESWL) "to ensure that indeed the surgical approach was used and not the ESWL."

GAO report analyzes VA patient injury control

The US General Accounting Office has concluded that the Veterans Administration's patient injury control program is not effective. The program, a quality assurance mechanism, requires each VA medical center to report, analyze, review, and investigate any unusual, unexpected, or unfavorable incident a patient may experience.

Senator Frank H. Murkowski, ranking minority member of the Senate Committee on Veterans' Affairs, requested the report, which was issued May 18, 1987. It notes, "VA's patient injury control program has not been effective in preventing the recurrence of more serious incidents, eg, unexpected deaths and surgical complications. These incidents have been underreported principally due to disincentives for staff to report them and lack of reporting guidance from and oversight by VA's central office."

To improve the situation, the GAO recommended that "VA improve its patient injury control system by (1) reinforcing both the importance of the patient injury control program . . . and the need to comply with federal regulations, (2) clarifying what incidents are to be reported and investigated, (3) simplifying the investigation process, and (4) improving central office oversight of centers' programs."

The VA concurred with the GAO's recommendations for improvement and will publish a revised guideline manual, which is expected to be available in October 1987. However, the administration took exception to the report's title, *VA Health Care: VA's Patient Injury Control Program Not Effective*. VA Administrator Thomas K. Turnage wrote, " . . . we cannot accept GAO's statement, as indicated by the report title, that the program is not effective. We suggest that a more accurate description of the program, and title for GAO's report, would be *Improvements Needed in the VA's Patient Injury Control Program*."

Noting that "accurate incident reporting is the cornerstone of an effective pa-

Un-switch-ables

Patients and physicians alike prefer

Transderm-Nitro®
nitroglycerin

Over half a billion* patches prescribed in the U.S. since 1982

The only patch with a rate-limiting membrane

Familiar, distinctive tan color and unique shape recognized by patients everywhere

There's no substitute for experience

C I B A

(See Brief Summary of Prescribing Information on the next page.)

*Data on file, CIBA Pharmaceutical Co.

629-7750-A

Transderm-Nitro®
nitroglycerin
Transdermal Therapeutic System

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE INSERT)

INDICATIONS AND USAGE
This drug product has been conditionally approved by the FDA for the prevention and treatment of angina pectoris due to coronary artery disease. The conditional approval reflects a determination that the drug may be marketed while further investigation of its effectiveness is undertaken. A final evaluation of the effectiveness of the product will be announced by the FDA.

CONTRAINDICATIONS
Intolerance of organic nitrate drugs, marked anemia, increased intraocular pressure or increased intracranial pressure.

WARNINGS
In patients with acute myocardial infarction or congestive heart failure, Transderm-Nitro system should be used under careful clinical and/or hemodynamic monitoring.
In terminating treatment of anginal patients, both the dosage and frequency of application must be gradually reduced over a period of 4 to 6 weeks to prevent sudden withdrawal reactions, which are characteristic of all vasodilators in the nitroglycerin class.
Transdermal nitroglycerin systems should be removed before attempting defibrillation or cardioversion because of the potential for altered electrical conductivity which may enhance the possibility of arcing, a phenomenon associated with the use of defibrillators.

PRECAUTIONS
Symptoms of hypotension, such as faintness, weakness or dizziness, particularly orthostatic hypotension may be due to overdosage. When these symptoms occur, the dosage should be reduced or use of the product discontinued
Transderm-Nitro system is not intended for immediate relief of anginal attacks. For this purpose occasional use of the sublingual preparations may be necessary.

ADVERSE REACTIONS
Transient headaches are the most common side effect, especially when higher doses of the drug are used. These headaches should be treated with mild analgesics while Transderm-Nitro therapy is continued. When such headaches are unresponsive to treatment, the nitroglycerin dosage should be reduced or use of the product discontinued
Adverse reactions reported less frequently include hypotension, increased heart rate, faintness, flushing, dizziness, nausea and vomiting. These symptoms are attributable to the known pharmacologic effects of nitroglycerin, but may be symptoms of overdosage. When they persist the dose should be reduced or use of the product discontinued. In some patients, dermatitis may occur.

OOSAGE ANO ADMINISTRATION
Therapy should be initiated with application of one Transderm-Nitro 5 system to the desired area of skin. Many patients prefer the chest; if hair is likely to interfere with system adhesion or removal, it can be clipped prior to placement of the system. Each system is designed to remain in place for 24 hours, and each successive application should be to a different skin area. Transderm-Nitro system should not be applied to the distal parts of the extremities
The usual dosage is one Transderm-Nitro 5 system every 24 hours. Some patients, however, may require the Transderm-Nitro 10 system. If a single Transderm-Nitro 5 system fails to provide adequate clinical response, the patient should be instructed to remove it and apply either two Transderm-Nitro 5 systems or one Transderm-Nitro 10 system. More systems may be added as indicated by continued careful monitoring of clinical response. The Transderm-Nitro 2.5 system is useful principally for decreasing the dosage gradually, though it may provide adequate therapy for some patients when used alone
The optimal dosage should be selected based upon the clinical response, side effects, and the effects of therapy upon blood pressure. The greatest attainable decrease in resting blood pressure that is not associated with clinical symptoms of hypotension especially during orthostasis indicates the optimal dosage. To decrease adverse reactions, the size and/or number of systems should be tailored to the individual patient's needs
Do not store above 86°F (30°C).

PATIENT INSTRUCTIDNS FDR APPLICATIDNS
A patient leaflet is supplied with the systems.

HOW SUPPLIED

Transderm-Nitro System Rated Release *in vivo*	Total Nitroglycerin in System	System Size	Carton Size
2.5 mg/24 hr	12.5 mg	5 cm^2	30 Systems (NDC 0083-2025-26) *100 Systems (NDC 0083-2025-30)
5 mg/24 hr	25 mg	10 cm^2	30 Systems (NDC 0083-2105-26) *100 Systems (NDC 0083-2105-30)
10 mg/24 hr	50 mg	20 cm^2	30 Systems (NDC 0083-2110-26) *100 Systems (NDC 0083-2110-30)
15 mg/24 hr	75 mg	30 cm^2	30 Systems (NDC 0083-2115-26) *100 Systems (NDC 0083-2115-30)

*Hospital Pack 100's

C85-35 (Rev. 11/85)

Dist. by:
CIBA Pharmaceutical Company
Division of CIBA-GEIGY Corporation
Summit, New Jersey 07901

All transdermal nitroglycerin products are being marketed pending final evaluation of effectiveness by the FDA.

© 1986, CIBA. 629-7750-A

C I B A

CARAFATE®
(sucralfate)

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

References:

1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

Another patient benefit product from
MARION PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

1594H7

Ulcer therapy that won't yield, even to smoking

What do you do for duodenal ulcer patients who should stop smoking, but won't? Both cimetidine[1] and ranitidine[2] have been shown less effective in smokers than nonsmokers.

Choose CARAFATE® (sucralfate/Marion). Two recent studies show Carafate to be as effective in smokers as nonsmokers.[3,4] A difference further illustrated in a 283-patient study comparing sucralfate to cimetidine[5]:

Ulcer healing rates:
(at four weeks of therapy)[5]

Sucralfate:	
All patients	79.4%
Smokers	81.6%*
Cimetidine:	
All patients	76.3%
Smokers	62.5%

*Significantly greater than cimetidine smoker group ($P<.05$).

Carafate has a unique, nonsystemic mode of action that enhances the body's own ulcer healing ability and protects the damaged mucosa from further injury.

When your ulcer patient is a smoker, prescribe the ulcer medication that won't go up in smoke: safe, nonsystemic Carafate.

Nothing works like

CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

1594H7

There's never been a better time for her

nd PREMARIN®

Proven benefits beyond relief of vasomotor symptoms

No other estrogen proven effective for osteoporosis

Only conjugated estrogens tablets have established efficacy in both osteoporosis[1] and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.
And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.[2]

PREMARIN®
(conjugated estrogens tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

PREMARIN®
(conjugated estrogens tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(conjugated estrogens)

Vaginal Cream

0.625 mg/g

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, In a nonliquefying base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA
Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.
2 ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.
The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of materiaf derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:
a. Increased sulfobromophthalein retention.
b. Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability.
c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.
d. Impaired glucose tolerance.
e. Decreased pregnanediol excretion.
f. Reduced response to metyrapone test.
g. Reduced serum folate concentration.
h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment, increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome, tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption, loss of scalp hair, hirsutism; sleepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria, edema, changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically.* Osteoporosis. Female castration. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Lindsay R, Hart DM, Clark DM: The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 19B4;63:759-763. **2.** Studd JWW, Thom MH, Paterson MEL, et al: The prevention and treatment of endometrial palhology in postmenopausal women receiving exogenous estrogens, in Pasetto N, Paoletti R, Ambrus JL (eds): *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 19B0, chap 13.

© 1987 Ayerst Laboratories
All rights reserved.

6437/587

Ayerst® AYERST LABORATORIES
New York, NY 10017

tient injury control program," the GAO found that about 86% of cases of the serious incidents that the office reviewed were not reported.

The GAO further discovered that of those serious incidents that were reported, ". . . not all . . . were being investigated, the investigations forwarded to the medical inspector were not always adequate, and investigations were not reported expeditiously to the medical inspector."

CAPITAL COMMENTS

New law makes it illegal to drive while drinking

Beginning Sept 1, 1987, it is illegal in Texas to drive while consuming an alcoholic beverage.

The new law, which was sponsored in the Texas Senate by Bill Sarpalius (D-Canyon), states, "A person commits an offense if the person consumes an alcoholic beverage while operating a motor vehicle in a public place, . . . and is observed doing so by a police officer."

The legislation provides that a violation of the law is a Class C misdemeanor, which is punishable by a fine not to exceed $200.

Mrs Bratcher receives award for political participation

The American Medical Political Action Committee (AMPAC) has recognized Mrs Everett (June) Bratcher, San Antonio, for her "commitment and . . . total willingness to perform those political tasks that will accrue to the benefit of the medical profession and the quality of care for all Americans."

Mrs Bratcher accepted the first Belle Chenault Award for Political Participation during the annual AMPAC breakfast at the AMA Auxiliary Annual Meeting in Chicago in June. The award was named to honor Mrs Chenault's ten years of service to the AMPAC Board and other significant activities on behalf of medicine. Mrs Chenault, who is from Huntsville, Ala, also is a past president of the AMA Auxiliary.

Mrs Bratcher has played an active role in election campaigns for both Democrats and Republicans since 1974. Since 1982, she has been the chairman of the Texas Medical Political Action Committee (TEXPAC) Candidate Support Committee. She has motivated, trained, and organized TMA Auxiliary members to participate in elections, and has conducted seminars on "How To Be Politically Effective."

In the 1986 elections, Mrs Bratcher helped organize the successful state senatorial campaign of San Antonian Frank Tejeda, who observed, "What has always impressed me about June is not only her outstanding organizational abilities and eagerness to work, but her willingness to perform even the most tedious details of campaign work, such as sealing envelopes, knocking on doors, preparing coffee, and washing dishes. Her superb organizational abilities are complemented by her readiness to take on all the little unforeseen emergencies that arise in any campaign."

AMPAC Chairman Joseph L. Hatch, MD, added, "This honor is richly deserved, and AMPAC is proud to confer it on one who has labored so diligently and has truly 'made a difference' in all that she has undertaken."

Commenting on the award, Mrs Bratcher observed that it recognizes the importance of working in the legislative process. "In the past it's been necessary, but not really noticed," she said. "I hope it will inspire other auxiliary members to get involved in politics. I accepted it not only for myself, but also for the Texas auxiliary members who have worked so hard."

Mrs Bratcher's future includes conducting political involvement classes for the state's local auxiliaries and working toward increasing the auxiliary's membership in the TEXPAC 300 Club.

Mrs Everett (June) Bratcher, San Antonio (right), accepts the Belle Chenault Award for Political Participation. Mrs Chenault (left) was present for the ceremony during the annual AMPAC breakfast.

NEWSMAKERS

WILLIAM A. SPENCER, MD, founder and president of The Texas Institute for Rehabilitation and Research (TIRR) in Houston, has been honored for 37 years of national and international contributions to rehabilitation medicine. Dr Spencer retired July 1, 1987, as president of TIRR to become president of the TIRR Foundation, which will develop financial support for the hospital's programs. In a letter of commendation, President Ronald Reagan called Dr Spencer's career "inspired and inspiring." In addition to the President's letter, Dr Spencer received a proclamation from Houston Mayor Kathy Whitmire declaring June 20 William A. Spencer Day in Houston, an award from the President's Committee on Employment of the Handicapped, and an award for distinguished service from the Texas Rehabilitation Commission.

Two physicians are among 12 Texans chosen to serve on the Advisory Committee on Research of the Texas College & University System Coordinating Board. MICHAEL BROWN, MD, Dallas, and WILLIAM BUTLER, MD, Houston, will serve on the newly formed committee, which will recommend research priorities, guidelines, and procedures to follow in making peer review-based grant awards under the Advanced Research Program and Advanced Technology Program created by the 70th Texas Legislature.

Dr Brown is the Paul J. Thomas Professor of Medicine and Genetics and director of the Center for Genetic Diseases at The University of Texas Health Science Center at Dallas. He and Joseph Golds-

tein, MD, received the Nobel Prize for physiology or medicine in 1985. Dr Butler is president of Baylor College of Medicine and chairman-elect of the Council of Deans of the Association of American Medical Colleges. He serves as a consultant to TMA's Council on Medical Education.

CHARLES B. McCALL, MD, vice president for patient affairs at The University of Texas M.D. Anderson Hospital and Tumor Institute, has been named chairman of a special American Medical Association commission formed to review the standards of medical education and training in the US.

LUTHER K. ROBINSON, JR, MD, assistant professor in the department of pediatrics at The University of Texas Medical School at Houston, has been named a recipient of the John P. McGovern Outstanding Teacher Award. Dr Robinson was selected by the students as a faculty member who stimulates curiosity, promotes professional development, and contributes to the students' abilities to think independently.

ROBERT S. SPARKMAN, MD, Dallas, has been honored with the establishment of the Robert S. Sparkman Endowed Chair in Surgery at Baylor University Medical Center in Dallas. The chair was established to recognize the outstanding contributions made by Dr Sparkman to excellence in education, research, and patient care at the medical center. Dr Sparkman has been a vital force in the development of the department of surgery, and the medical center as a whole, from the time he joined the staff in 1946.

RONALD C. JONES, MD, Dallas, has been named to occupy the Robert S. Sparkman Chair in Surgery and to serve as chief of surgery at Baylor University Medical Center. Dr Jones has served as president of the Faculty Senate at The University of Texas Health Science Center at Dallas and formerly was acting chairman of the department of surgery for more than two years.

Officers elected to serve on the Texas Medical Foundation Board of Trustees for 1987–1988 include JOHN M. SMITH, JR, MD, San Antonio, president; DONALD M. PETERSON, DO, Dallas, vice president; MARSHALL K. DOUGHERTY, MD, Paris, treasurer; and DRUE O.D. WARE, MD, Fort Worth, secretary.

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology

- Provides 20 hours of CME Category 1 Credit

MARCH 1987 / VOL. 9, NO. 3
Family Practice Recertification®
Cl. 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Scheibel, MD
Cl. 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Attico, MD • Richard J. Smith, III • Michael A. Friedman
Cl. 1 Communicable diseases
Acquired Immunodeficiency Syndrome, Part 2: The Spectrum of Disease
Navin M. Amin, MD
Cl. 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD
EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

1987 Calendar Of Workshops

Sponsored By The Texas Medical Association

For your information: This is your calendar of workshops and seminars sponsored by the Texas Medical Associatian during the remainder of 1987.

Keep this in a convenient place for easy reference. Tack it to your bulletin baard! Please feel free to contact us when yau have questions: **TMA Practice Management Workshops, 1801 North Lamar Blvd., Austin, Texas 78701, 512/477-6704, ext. 262.**

All workshop registration information will be mailed approximately six weeks prior to the scheduled time for each series.

How to Get Started in Medical Practice is a twa-day series for physicians who plan to go solo, join a partnership or group practice, or need direction on which way to go. Concepts presented in this workshop will help avoid many medical practice management problems. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Na registration fee for senior residents currently enrolled in a recognized Texas residency pragram. Registratian fee for others: TMA member, $115; non-member, $140.

Insurance Claims Preparation, Coding and Documentation is a half-day workshop that facuses on the "how-to's" of insurance claims preparation and coding with special emphasis on medical, surgical, and diagnastic cading. Workshop material includes sample claim forms and actual case histories fram which to learn. Faculty: Harald Whittington & Assaciates, Dallas. Registration fee: TMA member, $75; non-member, $100.

How to Improve Your Third-Party Reimbursement is a half-day warkshop presented in conjunction with the coding series described above. The series is designed ta help physicians and their office staffs gain a better understanding of the Medicare/Medicaid reimbursement system and haw to obtain appropriate third-party reimbursement. Faculty: Harald Whittington & Associates, Dallas. Registratian fee: TMA member, $75; nan-member, $100.

Medical Office Management Institute (MOMI) is a week-long series af in-depth programs specifically designed far medical office managers, supervisors and affice staff. The one-day warkshops include **Computers in Medical Practice, Patient Flow Management, Personnel Management, Personnel Problem Solving** and **Financial Management.** Faculty: Canamikes Associates, Inc., Marina del Rey, CA. Registration fee: TMA member, $120 for each ane-day workshop; $525 for all five warkshaps. Non-member, $155 for each ane-day warkshop; $700 far all five workshaps.

The follawing county medical societies are participating as co-sponsors in the 1987 TMA practice management workshaps and seminars:

Bexar County Medical Society
El Paso County Medical Society
Harris County Medical Society
Potter-Randall County Medical Society
Tarrant County Medical Society
Taylor-Jones-Haskell County Medical Society
Travis County Medical Society

How to Run A More Profitable Practice is an actian-ariented workshap designed ta give effective salutions to help the physician maximize revenues, minimize overhead, and make it all happen with a tested 31-step strategy. Topics include insurance billing methods, improving patient mix, PPO/HMO/IPA strategy, fee analysis, compensation formulas, overhead reduction options, how ta get things dane, role of the office manager, physician leadership, year-round planning, and do-it-yourself reports that every practice should have. Faculty: Conomikes Associates, Inc., Marina del Rey, CA. Registratian fee: TMA member, $155; nan-member, $175.

Personal Income and Estate Tax Planning is a two-day seminar for physicians and spouses to help them understand the fundamentals of tax planning and why prudent planning and management are so important. Faculty: Robert Jorrie, Jorrie, Archer, Standley, and Chovanec, Inc., San Antanio. Registration fee: TMA member, $220; non-member, $270. (There is na additional cost for spouse if physician attends.)

Increasing Your Net Worth Through Financial, Pension, and Investment Planning is a ane-day seminar designed to acquaint physicians with techniques available under current law ta establish the mast effective business structure for their medical practice in arder ta minimize federal income tax liability, increase net worth, and create additianal funds for practice develapment and grawth. Faculty: Glazer, Suellentrap, and Associates, Inc., Dallas. Registration fee: TMA member, $170; nan-member, $210. (There is na additianal cost for spouse if physician attends.)

Gearing Up for Retirement is a one and one-half day seminar designed ta assist physicians and their spouses in planning for a successful retirement. Seminar topics include clasing a medical practice, legal and tax considerations, and optimizing retirement income. Registratian fee: TMA member, $210; nan-member, $250. (There is no additional cast far spause if physician attends.)

1987 Workshop Schedule By Series

Workshop Series	Date	City
How to Get Started in Medical Practice (Conomikes Associates, Inc.)	November 11–12 November 13–14 November 18–19 November 20–21 December 2–3 December 4–5 December 8–9 December 10–11	Dallas El Paso Houston Lubbock Fort Worth Temple Houston San Antonio
Insurance Claims Preparation, Coding and Documentation (Morning) Harold Whittington & Associates) **and** **How to Improve Your Third-Party Reimbursement** (Afternoon) (Harold Whittington & Associates)	September 16 September 18 September 29 September 30 October 2 October 9 October 13 October 14 October 16	San Antonio El Paso Lubbock Midland Dallas Tyler Waco Fort Worth Houston
Medical Office Management Institute (MOMI) (Conomikes Associates, Inc.	August 3–7 August 24–28	San Antonio Dallas
How to Run a More Profitable Practice (Conomikes Associates, Inc.)	October 6 October 7 October 8 November 4 November 5	Houston San Antonio Austin Amarillo Dallas
Personal Income and Estate Tax Planning (Robert Jorrie)	November 7–8	Dallas
Increasing Your Net Worth (Glazer, Suellentrop, and Associates)	September 12 October 10	Austin San Antonio
Gearing Up for Retirement	October 23–25	Houston

1987 National Physician Symposium On Home Health Care

In Cooperation with The University of Texas Health Science Center at Houston

"...Physicians and patients are not aware of what home health services are available or how to obtain them..."

Annals of Internal Medicine
September, 1986

The Hospital Comes Home.
The National Physician Symposium on Home Health Care will review contemporary protocols in noninstitutional medicine for both subacute and long-term care to enable you to take advantage of the increasing patient preference for home health care. Gain insights from nationally-recognized physicians and other health care professionals in assessment through application:

- Pediatrics and Infant Care
- Oncology
- Infusion Therapy
- Clinical Monitoring
- Rehabilitation
- Respiratory/Pulmonary, adult and infant

Symposium Attendees Will Be Able To:

- Make intelligent, responsible decisions regarding treatment alternatives
- Establish responsibility for medical plan of treatment and periodic review
- Maintain continuity of care
- Detect early signs of psychosocial problems associated with home care
- Identify ways to integrate clinical practice with the home setting
- Increase knowledge of effective, non-institutional care
- Evaluate and select quality home care providers

Earn Continuing Education Credits. The University of Texas Health Science Center at Houston is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

The University of Texas Health Science Center at Houston, Office of Continuing Education of the Medical School, designates this continuing medical education activity for 12 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

This special clinical home health care symposium will directly precede the Southern Medical Association's Annual Scientific Assembly that begins November 1. Call or write today for full details.

Oct. 30-31, St. Anthony Inter-Continental Hotel, San Antonio, Texas

THE HOSPITAL COMES HOME.

NPS™ NATIONAL PHYSICIAN SYMPOSIUM ON HOME HEALTH CARE

Supported by a grant from:

CURAFLEX® HEALTH SERVICES

Attn: Department of Professional & Clinical Education
2950 North Loop West
Suite 600
Houston, Texas 77092-8802
(713) 688-6400
(800) 323-3713 (in Texas)

EMERGENCY! MEDICAL CLAIMS OVERLOAD!

The EMC*EXPRESS™ *System*

TO THE RESCUE!

If claims processing paperwork can get your office all backed up, you need to call in GE Information Services' EMC*EXPRESS rescue squad.

The **EMC*EXPRESS System** is a computerized medical claims system which enables you to deliver medical claims to participating carriers within hours of treating a patient. One phone call is all it takes to have your computer speed all the information needed to process your claims to **multiple** carriers, including Medicare, commercial and private.

Working with the software already in your office, the **EMC*EXPRESS** System helps you:

- Reduce your administrative costs for processing claims
- Reduce the number of claims rejected because of incorrect or incomplete information
- Speed up your claims payment—**and that can put new life into your cash flow.**

The EMC*EXPRESS System and Your Office

The EMC*EXPRESS System accommodates a broad range of practice sizes and a wide variety of office computer systems, from easy-to-use claims entry systems to the most sophisticated practice management systems.

So whatever the size of your office, whatever the magnitude of your paperwork problem, we recommend the **EMC*EXPRESS** System as your treatment of choice.

For more than 20 years, GE Information Services has been helping companies around the world do business better. And now GE has teamed up with authorized system vendors to bring rapid, accurate, and cost-effective electronic medical claims communications to the healthcare field.

To have the EMC*EXPRESS rescue squad come to your aid, call an authorized EMC*EXPRESS system vendor or contact us directly at 1-800-433-3683, extension 7321. We'll send help your way before you can say, "Emergency!"

GE INFORMATION SERVICES

USA

The EMC*EXPRESS™ System

PARTICIPATING CARRIERS

Blue Cross and Blue Shield of Texas
Medicare B, and Private Business Claims
National Heritage Insurance Co.
Medicaid Claims

NEIC ACTIVE PARTICIPANTS

Aetna Life & Casualty
Allstate Life Insurance Co.
Benefit Trust Life
CNA Insurance Companies
Confederation Administration Life Insurance Co.
Confederation Life Insurance Co.
Connecticut Life Insurance Co.
Connecticut General Life Insurance Co. (CIGNA)
Equitable Life Assurance Society of the U.S.
General American Life Insurance Co.
The Great-West Life Assurance Co. of America
Gulf Group Services
The Hartford Insurance Group
John Hancock Mutual Life Insurance Co.
Liberty Life Assurance Co.
Lincoln National Life Insurance Co.
Massachusetts Mutual Life Insurance Co.
Metropolitan Life Insurance Co.
Mutual of Omaha Insurance Co.
New England Mutual Life Insurance Co.
New York Life Insurance Co.
Pacific Mutual Life Insurance Co.
Philadelphia American Life Insurance Co.
Philadelphia Life Insurance Co.
Phoenix Mutual Life Insurance Co.
Pilot Life Insurance Co.
Principal Mutual Financial Group
Provident Life and Accident Insurance Co.
Prudential Insurance Co.
State Mutual Insurance Co.
The Travelers Insurance Co.
(includes Railroad Retirement)
Unionmutual Stock Life Insurance Co.
PPO Network, Inc.

AUTHORIZED SYSTEM VENDORS

American Computer Corporation	619 571-7685
Annson Systems	312 564-8310
Articulate Publications, Inc.	800 872-2282
Artificial Intelligence, Inc.	206 271-8633
CALYX	800 558-2208
Colwell Systems, Inc.	800 637-1140
Coopervision	800 772-CVIS
Direct Connection Systems	817 757-4007
EDP Systems, Inc.	214 881-8454
Effective Solutions and Services	312 635-9911
Health America Systems	312 362-3730
LDS, Inc.	913 648-7111
MOS, Inc.	800 323-6671
Physicians' Micro Systems, Inc.	206 441-8490
Physicians' Office Computer	213 603-0555
PPO Network, Inc.	713 590-2175
Prism Data Systems	800 428-2310
ProSource Systems	800 645-5609
Santiago Data Systems, Inc.	800 652-3500
Unitec, Inc.	800 237-3762
UNIVAIR, Inc.	314 426-1099
Westland Software House, Inc.	818 992-0081

NEW VENDORS AND CARRIERS ADDED REGULARLY. FOR MOST RECENT LISTINGS, CALL 1-800-433-3683.

GE INFORMATION SERVICES
USA

401 N. WASHINGTON ST., ROCKVILLE, MD 20850

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

JUST ARRIVED:

1987 325 Convertible

The first BMW Convertible offered in over three decades. Its 168-h.p. engine has 39% more power than 1986 3-series.

JUST ARRIVED:

1987 7-Series

An entirely new luxury sedan for 1987. From its aerodynamic exterior to its hand-sewn leather interior, this car's impact will be measured in decades, not years.

JUST ARRIVED:

1987 M-Series

The three new M-Series BMW's represent the two fastest production sedans available in the U.S., (M3 and M5), and a limited edition sports coupe (M6) with such features as a hand built 256-h.p. engine and hand tuned suspension.

Over 150 new BMW's to choose from. All with ABS brakes and 3 year/36,000 mile warranty.

the New BMW

BMW CENTER

FACTORY AUTHORIZED.

4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

Harold Whittington has some serious questions:

Q: Is Medicare participation for you?

A: We can:

- Identify advantages, disadvantages and consequences of both participation and non-participation.
- Pinpoint your "bottom-line" for both participation and non-participation.
- Determine the financial impact on your practice.

Don't make this very critical decision without all the facts.

Q: Do you understand & benefit from MAAC?

A: If you're confused and concerned about Medicare's MAAC (and who isn't), let us:

- Maximize MAAC implementation
- Minimize MAAC disadvantages
- Insure MAAC compliance
- Identify and correct MAAC errors
- Recalculate your MAAC's using the latest concessions Medicare has grudgingly made.

Leave nothing to chance! Let us help you avoid future costly penalties for non-compliance.

Q: Do Medicare audits & sanctions apply to you?

A: Medicare is on an auditing rampage and many physicians have been hurt because they were unprepared or misinformed. Let us:

- Determine if you are a likely candidate for an audit, refund or sanction.
- Develop strategies to avoid future problems.
- Negotiate with Medicare and the PRO if you have already been audited and sanctioned.

Save yourself time and money by letting us handle it.

Q: When is it time to computerize your practice?

A: You don't have to take time away from practice & patients to make this decision. We can help. Let us:

- Identify your exact automation needs.
- Evaluate & select most appropriate hardware and software for your practice & pocketbook.
- Negotiate contracts to get best "bottom-line".
- Monitor installation.

We can insure a smooth transition from a manual office to a computerized one.

We take the pulse of your practice.

Harold Whittington & Associates
12970 Pandora, Suite 106
Dallas, Texas 75238

Call for more information (214) 343-7176

Consultants to the Texas Medical Association.

CHARLES E. BEGLEY, PhD

DOUGLAS A. MAINS, MPA, MBA

Health care spending in Texas, 1975–1984

Charles E. Begley, PhD, Assistant Professor of Health Policy, and Douglas A. Mains, MPA, MBA, Faculty Associate, The University of Texas School of Public Health, Houston. Send reprint requests to Dr Begley, School of Public Health, The University of Texas Health Science Center, PO Box 20186, Houston, TX 77225.

This paper summarizes aggregate health care spending patterns in Texas for the period from 1975 through 1984 and compares them to recent national trends. It also reports state government health care expenditures separately and analyzes them in terms of the major programs that drive the state's health budget and the types of services that are purchased.

This is the second in a series of reports on health care spending patterns in Texas. It shows how these patterns have changed over the past few years and how they compare with national trends. In an earlier article, we reported similar data for the period from 1975 through 1983 (1). In this article, we provide revised estimates of aggregate spending for 1975 through 1983, using better estimation methodology and new data sources. In addition, we present new estimates for 1984.

In reporting these data, we do not wish to imply that health care spending is either too high or too low in Texas. We hope simply to inform readers of the magnitude of spending levels in the state, their distribution among different services and government programs, and any revealed trends over time. This information is particularly timely, given the state's declining economic climate and consequent fiscal problems. It is also important because of the dramatic changes that are occurring in health care economics. The report begins with a brief summary of the most recent national estimates of health care spending, followed by Texas-specific estimates by category of service. The final section presents and analyzes state government spending on health care.

National health care expenditures

Fig 1 presents a summary of the most recent national estimates of health care spending (2). The following major points are illustrated.

Total expenditures for health care have grown dramatically in the past ten years, reaching $387.4 billion in 1984, or $1,516 per person. This compares to $132.7 billion in 1975, or $554 per capita.

The average annual growth rate, which was 12.7% over the period, slowed the last two years. The growth rate fell to 9.1% in 1984—the first time in ten years that the increase has not been in double digits.

Because of the slowdown, the health care expenditure share of the gross national product dropped slightly in 1984 from 10.7% to 10.6%—only the second time in ten years that this has occurred.

The recent slowdown in the growth of health care spending can be attributed to lower price inflation and to changes in health care financing that are reducing utilization. These factors are particularly acute in the hospital sector where input prices dropped to 5.9% in 1984, admissions declined 1.4 million (down 3.7%), inpatient days were off 22.7 million (down 8.6%), and length of stay declined to 6.7 days—the lowest level ever recorded. Growth in hospital spending was only 6.1% for the year, the slowest rate for this category of spending in 19 years (2, p 1).

As a source of reform in health care financing, the federal government led the way with the introduction of the Medicare prospective payment system (PPS) for hospital care in 1983. By establishing preset rates per case that are independent of costs actually incurred, PPS gives hospitals a strong incentive to hold costs down. Prior to PPS, Medicare hospital expenditures grew at an average annual rate of 16.7%. In 1984, Medicare growth in hospital spending slowed to 9.6% (3).

States and private businesses are also providing a source of reform through the adoption of prospective payment techniques and encouragement of alternative delivery systems such as health maintenance organizations, preferred provider organizations, and primary care case-management programs. The cost control potential of these efforts rests largely in their success at keeping patients out of hospitals. They appear to be paying off in terms of slower growth in hospital spending. A number of studies are currently under way to evaluate the effects of these reforms on the quality of medical care. While there is anecdotal evidence that compromises may be occurring, there are no objective data indicating that the quality of care is declining as a result of these changes (4).

Texas expenditures on health care services

The same economic factors that appear to be slowing national health care spending are also affecting Texas. Health care spending in Texas has increased more rapidly than the national average over the last ten years, but the state appears to be experiencing a slowdown in expenditure growth, similar to that of the nation as a whole. Fig 2 presents a summary of total spending on health care in Texas for the period from 1975–1984 (methodology used to estimate Texas expenditures on health care is described in Appendix 1). The figure shows that total spending rose from $6.9 billion in 1975 to $24.1 billion in 1984. The average annual rate of growth was 13.2% per year, higher than the national growth of 12.7%. The rate of growth slowed to 11.6% in 1984, but remained above the national growth rate of 9.1%.

While health care spending in Texas continues to grow faster than the national average, the health care expenditure burden remains less. On a per capita basis (eliminating the influence of population size and differential population growth), Texans

spent 96% of the national average on health care in 1984 ($1,454 versus $1,516) and about the same percentage in 1975. This indicates that the relatively more rapid growth in spending can be attributed to the growing population rather than to an increase in spending per person.

Texans also spend relatively less than the nation in terms of the proportion of the state product devoted to health care. For the nation as a whole, health care spending comprises almost 11% of economic output, whereas in Texas it is roughly 9%. However, the gap between Texas and the nation in this respect is narrowing, as the oil and gas recession slows the growth in the Texas economy relative to the rise in health care spending.

Fig 3 shows the per capita distribution of health care spending in Texas by category of service and compares it to the nation. As indicated in the figure, Texans spend the least amount of their health care dollar on public health activities and eyeglasses and medical appliances, and the largest amounts on hospital care and physicians' services. The most rapidly growing item is prepayment and administration, which rose more than threefold over the period. These expenditures are made for the operation of private third-party insurance programs and public vendor payment programs such as Medicaid and the state portion of Medicare. The largest component (78%) goes to private health insurance companies, and represents the difference between premiums received by these companies and incurred claims. Estimated at $1.4 billion for 1984, these costs reflect administrative expense, addition to loss reserves, and profits or losses of Blue Cross and Blue Shield plans, mutual and stock carriers, and prepaid and self-insured health plans operating in the state.

Per capita spending on government public health activity is well below the national average. Since these expenditures are made through state and local government, their discussion is left to the next section of this article. Although the differences are not as dramatic, Texans also spend significantly less than the national average on hospital care, dental services, and nursing home care, and significantly more

1. National health care expenditures, 1975–1984.

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total ($ in billions)	132.7	150.8	170.2	190.0	215.1	247.5	285.8	321.2	355.1	387.4
Per capita ($)	553.7	624.8	702.9	779.1	874.7	1,000.0	1,142.1	1,275.9	1,397.4	1,515.5
Annual change (%)		13.6	12.9	11.6	13.2	15.1	15.5	12.4	10.6	9.1
Percent of GNP	8.6	8.8	8.9	8.8	8.9	9.4	9.7	10.5	10.7	10.6

2. Texas health care expenditures, 1975–1984.

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total ($ in millions)	6,860.7	7,977.4	9,232.1	10,670.5	12,309.7	14,032.4	16,565.7	19,241.7	21,615.4	24,125.5
Per capita ($)	536.1	607.0	685.2	773.6	857.4	953.2	1,105.7	1,206.4	1,327.6	1,453.8
Annual change (%)		16.3	15.7	15.6	15.4	14.0	18.1	16.2	12.3	11.6
Percent of TSP	7.5	7.8	7.9	8.0	8.1	8.2	8.0	8.8	9.3	9.4

3. Per capita distribution of health care spending by category of service in Texas and comparison to the nation.

	Texas			As a Percent of US		
Category	1975 ($)	1980 ($)	1984 ($)	1975 (%)	1980 (%)	1984 (%)
Personal health care						
Hospital care	204.86	379.20	580.89	87.77	88.31	90.21
Physicians' services	111.33	209.11	328.13	100.38	105.41	106.71
Dentists' services	30.28	55.02	87.15	82.89	84.28	85.14
Other professional services	12.11	21.72	33.22	104.57	91.49	92.56
Drugs and drug sundries	60.29	89.16	120.21	113.74	113.69	114.25
Eyeglasses and appliances	14.09	22.68	27.22	98.86	104.93	90.19
Nursing home services	43.21	77.58	101.80	96.05	89.71	78.01
Other health services	11.56	21.50	34.85	68.30	85.95	90.92
Prepayment and administration	37.41	58.69	112.68	209.96	150.49	144.66
Government public health activities	10.98	18.49	27.62	77.03	56.66	63.29
Total	536.12	953.14	1,453.77	96.83	95.31	95.93

on drugs and medications.

Lower levels of hospital care spending are the result of both lower hospital costs and less utilization. The cost per day of care in Texas hospitals was 94% of the national average in 1982, indicating that Texas hospitals are generally less costly (5). Total hospital days per 1,000 population (admissions per 1,000 x average length of stay) was 92% of the national average in 1982, indicating that utilization of hospitals is also lower than the national average (5, p 24).

Generally, availability of nursing home beds and climate is positively correlated with the level of nursing home spending. In Texas, however, the supply of beds per 1,000 population 65 years of age or over (the population most likely to use nursing home services) was 73.9 in 1980 compared to the national average 60.2 (5, p 24). Thus, the relatively lower per capita spending figure for this category of service must be attributable to something else. Texas has a mild climate which probably reduces demand. An additional factor is undoubtedly the policies of the Texas Medicaid program which is a major source of payment for nursing home care. As was discussed in our earlier report, efforts were made by the state in the early 1980s to limit the growth of Medicaid spending on nursing home care (1). These efforts, combined with the restrictive eligibility and payment policies of the program, continue to serve as a major constraint on nursing home demand.

Per capita expenditures for dentists' services are related to the concentration of dentists in an area. During the period from 1969 through 1981, the number of dentists in Texas increased faster than population growth, raising the concentration of dentists (6). However, the state remains well below the national average, which may explain why spending is less.

The only category besides prepayment and administration that was significantly higher than the national average was drugs and drug sundries. Unfortunately, we are not able to relate these expenditure differences to price or utilization differences, so we do not know whether Texans consume more drugs per capita or whether they just pay more for them. However, since there are national prices and a national market for drugs, it is reasonable to assume that greater consumption is more likely to be the explanation.

State government health care expenditures

This section examines state government health care expenditures as a separate component of total health care spending. The distribution of spending by government program and category of service is presented and analyzed (Methods used to estimate state government spending are described in Appendix 2). The figures reflect five major roles that state government plays in health care: purchaser, through the statewide Medicaid program for the poor and disabled and through the employee health benefits program for state workers; direct provider of medical services, through public universities and in the public mental hospital system; education and research, through public and private universities; provider of public health services, through the programs of state, county, and city health departments; and administration and regulation, through the various regulatory agencies and licensing boards.

As indicated in Fig 4, a little over $3 billion was spent on these activities in 1984, up from $946 million in 1975. As a percentage of total health care spending, this represents 12.6%, down from 13.8% in 1975. Expenditures for the state's Medicaid program, together with direct subsidies to university hospital and state mental hospitals for patient services, and payments for medical education and research make up more than 75% of state government's health care budget. The relative importance of Medicaid has slipped since 1975, from 53.7% of the budget to 41.1% in 1984, while education and research, which was the most rapidly growing item in the state's health care budget, has grown in significance. Medical education and research spending by state government more than tripled over the period with the development of new medical schools at Texas A&M University and Texas Tech University, budget expansions at The University of Texas health science centers, and establishment of a University of Texas health center at Tyler.

Public health activities, administration and regulation, and employee health insurance comprise the remaining 17% of the budget, up from 10% in 1975. The increase in relative importance of these items is mainly due to expansion of public health grants from the federal government that occurred in the period from 1975–1979 and growth in employee health insurance benefit payments that has occurred in the last five years.

Fig 5 shows the distribution of health care services purchased by state government programs. By comparing this figure to Fig 3, one sees the relative importance of different services to the public and private sectors. For example, the role of state government in supplying medical education and research is revealed. Public health activities and nursing home care are also important services provided through government programs, while hospital care and physicians' services are relatively less important items. Hospital spending and physicians' services spending, along with prepayment and administration spending, are the most rapidly growing items in the state's health care budget, however, rising 13%, 16%, and 34% in 1984, respectively.

Hospital spending is driven by the state's Medi-

caid program, which was responsible for 44% of state government spending on hospital care in 1984. The state subsidy to The University of Texas Medical Branch at Galveston for patient care services was responsible for an additional 14%, and expenditures by state mental hospitals were responsible for 19% of total hospital spending. Medicaid spending on hospital care rose 15% in 1984.

Physicians' services spending through the Medicaid program accounts for 85% of all the state's activity in this category. Medicaid spending on physicians' services also rose 15% in 1984.

Seventy-seven percent of the third fastest growing category—prepayment and administration—is accounted for by Medicaid administration costs within the Texas Department of Human Services (TDHS) and by the operating costs of the National Heritage Insurance Company, which processes Medicaid claims for TDHS. As indicated earlier, these costs have also risen rapidly in the private sector.

In examining the most recent trends in state government spending, the slowdown in professional services and education and research spending are notable. For the most part, other professional services consist of community care for the aged and disabled provided by TDHS. This item grew from approximately $95 million in 1983 to $101 million, an increase of only 6%. The largest component of the education and research budget goes to state medical schools, which absorb 37% of all state funds in this category. The next largest item in this category is administration and operations costs at the state's health science centers, accounting for 24%. These two items grew at the rate of 5% and 8% respectively in 1984, well below their rates of growth of prior years.

Conclusion

There was a dramatic slowdown in the growth of expenditures for health in the nation and in Texas in 1984. Although the annual growth rate of spending is higher in Texas than the national average, Texans continue to spend less than the national average on a per capita basis and as a percentage of economic product. Spending on such items as prepayment and administration significantly exceeds the national average while per capita spending on public health activities is well below the national average.

State government spending on health care has grown less rapidly than total spending (both public and private), probably reflecting the greater sensitivity of public spending to economic conditions

4. State government health care expenditures by program, 1975, 1979, and 1984

	1975		1979		1984	
	Million $	%	Million $	%	Million $	%
Medicaid	507.9	53.7	841.2	48.6	1,245.8	41.1
AFDC health services	220.2		336.4		629.1	
Community care A/D	36.3		60.3		101.0	
Nursing home care	226.3		437.2		498.8	
Medical assistance in state institution	25.0		7.4		17.0	
Direct services	120.4	12.7	233.0	13.4	427.0	14.1
UTMB at Galveston	29.4		60.9		130.6	
UT System Cancer Center	15.3		45.2		93.3	
UTHC at Tyler	3.8		7.6		20.3	
State chest hospitals	6.3		8.3		14.8	
MHMR mental hospitals	65.7		111.0		168.0	
Education and research	122.7	13.0	272.0	15.7	575.8	19.0
Medical schools	51.5		106.9		214.3	
Other	71.2		165.2		361.5	
Government public health activities	50.2	5.3	145.5	8.4	249.3	8.2
Prepayment and administration	39.2	4.1	78.7	4.5	174.9	5.8
State employee health insurance	1.2	0.1	18.7	1.1	94.9	3.1
Other	104.3	11.0	143.0	8.3	260.8	8.6
Total	945.9	100.0	1,732.2	100.0	3,028.6	100.0

5. State government health care expenditures by category of service, 1975–1984.

	Total — $ Millions				Annual Percent Change		
	1975	1979	1983	1984	1975-1979	1979-1983	1983-1984
Personal health care	733.7	1,235.8	1,852.9	2,027.0	13.9	10.7	9.4
Hospital care	266.7	457.5	803.7	906.0	14.4	15.1	12.7
Physicians' services	84.7	115.1	174.1	202.5	8.0	10.9	16.3
Dental services	0.0	0.0	1.1	0.0	NA	NA	NA
Other professional services	51.7	82.3	148.1	161.3	12.3	15.8	8.9
Drugs and drug sundries	45.5	59.3	88.5	99.9	6.8	10.5	12.9
Eyeglasses and appliances	0.0	0.0	0.1	0.0	NA	NA	NA
Nursing home services	226.3	437.2	500.2	498.8	17.9	3.4	−0.3
Other health services	58.8	84.4	137.1	158.6	9.5	12.9	15.7
Prepayment and administration	39.2	78.7	130.4	174.9	19.0	13.5	34.1
Government public health activities	50.2	145.5	244.8	249.3	30.4	13.9	1.9
Education and research	122.7	272.0	534.9	575.8	22.0	18.4	7.6
Total	945.9	1,732.0	2,763.0	3,027.1	16.3	12.4	9.6

in the state. The most rapidly growing component of the state's health budget is education and research, which now absorbs almost 20% of government spending on health. However, this item grew less rapidly in 1984. The state's role as purchaser of health care for the poor and disabled under the Medicaid program has declined in its relative importance, but still absorbs 42% of the state health care budget.

REFERENCES

1. Begley CE, Kelly C, Mains DA: Texas health care expenditures, 1975–1983. Tex Med 81(12):56–64, 1985.
2. Levit KR, Lazenby H, Waldo DR, et al: National health expenditures, 1984. Health Care Financ Rev 7(1):1–35, 1985.
3. Guterman S, Dobson A: Impact of the Medicare prospective payment system for hospitals. Health Care Financ Rev 7(3):97–114, 1986.
4. Iglehart JK: Early experience with prospective payment of hospitals. N Eng J Med 314(22):1460–1464, 1986.
5. Levit KR: Personal health care expenditures, by state: 1966–1982. Health Care Financ Rev 6(4):1–49, 1985.
6. Bureau of Health Professions: Third report to the President & Congress on the status of health professions personnel, DHHS, Hyattsville, Md, January 1982.

Appendix 1: Methodology for estimating Texas state expenditures

Estimates of health care spending in Texas were made for the same eight categories of personal health care and two categories of nonpersonal health care that are provided at the national level. The categories include: spending on personal health care items such as hospital care, physicians' services, dentists' services, drugs, eyeglasses, and nursing home care; and spending on nonpersonal health care items including public health programs and prepayment and administration. Two other expenditure categories that were estimated at the national level—spending on research and on the construction of health facilities—were not included in the state figures because of difficulties in obtaining accurate information.

The Health Care Financing Administration (HCFA) periodically estimates personal health care expenditures at the state level. Their most recent estimates for Texas covered the years from 1975 through 1978, 1980, and 1982. For those years we accepted the HCFA data as the most accurate. For the historical years in which HCFA did not estimate expenditures (1975, 1979, 1981, 1983, and 1984), we estimated expenditures based on state data sources, adjusted for differences between the HCFA figures and our figures for the years that both were available.

Hospital Care: Hospital expenditure estimates were obtained from the American Hospital Association hospital statistics. The net total revenue of community hospitals was added to the total expenses of noncommunity hospitals to derive the total hospital expenditure estimate. This was done for each year, then compared to the HCFA estimates. The mean annual difference was calculated and added to our estimates to obtain the adjusted estimates.

Physicians' Services: Physicians' gross income (business revenue) was estimated by multiplying the number of licensed private practice MDs (obtained from Texas Department of Health) by the median gross income for physicians in the southwestern area (obtained from *Medical Economics*). The gross income of DOs was estimated by multiplying the number of licensed private practice DOs by a 1976 DO income estimate adjusted forward by the physician consumer price index. The MD and DO estimates were added, then compared to the HCFA estimates. The mean annual difference was calculated and added to our estimate to obtain the adjusted estimates.

Dentists' Services: The gross income of dentists was estimated by multiplying the number of licensed dentists in private practice (obtained from the Texas State Board of Dental Examiners) by the estimated mean gross revenue for dentists in the west south central region of the US. This mean gross revenue was calculated based on data obtained from *Dental Economics*. This journal reports the percentages of practicing dentists in various income brackets by region. By categorizing the income levels (taking midpoint of income bracket) and calculating univariate statistics, a "mean" gross revenue can be estimated. Our estimates were then adjusted by the mean annual difference obtained from comparing the estimates to the HCFA estimates.

Other Professional Services: The estimate for other professional services was obtained by using national expenditure data from HCFA reports and by using the current year physician estimate for Texas. The assumption was made that the Texas ratio of other professional services to physicians' services equals the national ratio of other professional services to physicians' services. The estimate obtained by using this formula was then adjusted by the difference between them and the HCFA data to provide adjusted estimates.

Drugs and Drug Sundries: The 1983 and 1984 estimates for drugs and drug sundries were calculated through extrapolation of HCFA data. The growth rate for 1981 to 1982 was multiplied by the HCFA 1982 estimate to obtain the 1983 estimate, which was, in turn, multiplied by the same growth rate to estimate 1984 expenditures.

Eyeglasses and Appliances: The 1983 and 1984 estimates were calculated using straight line extrap-

olation as in the drugs and drug sundries category.

Other Health Services: The 1983 and 1984 estimates were calculated using straight line extrapolation as in the drugs and drug sundries category.

Nursing Home Services: The 1983 and 1984 estimates were calculated using straight line extrapolation as in the drugs and drug sundries categories.

Prepayment and Administration: The estimates were based on four components: the net cost of accident and health insurance policies—benefits minus premiums (obtained from the Texas State Board of Insurance); the net of worker's compensation attributable to medical care—.41 x worker's compensation benefits minus payments (obtained from Texas State Board of Insurance); the administration costs of Medicare (.029 x total Texas Medicare); and the state government estimate for prepayment and administration (derived from state budget documents).

Government Public Health Activities: Government public health activity (GPHA) expenditures were estimated from three components: the estimate of state expenditures for GPHA (derived from state budget documents); the estimate of federal funds which are sent directly to local governments and spent on GPHA; and the estimate of local funds which are spent on GPHA.

Research and Education: Research and education expenditures were estimated from data reported in state budget documents and include expenditures on state-supported facilities of higher education related to health research and health manpower training, including programs in health services education and schools of medicine, dentistry, nursing, pharmacy, optometry, osteopathy, biomedical sciences, allied health sciences, and public health. (Expenditures on state-supported hospitals within these facilities are included under hospital care).

Appendix 2: Methodology for estimating state government expenditures

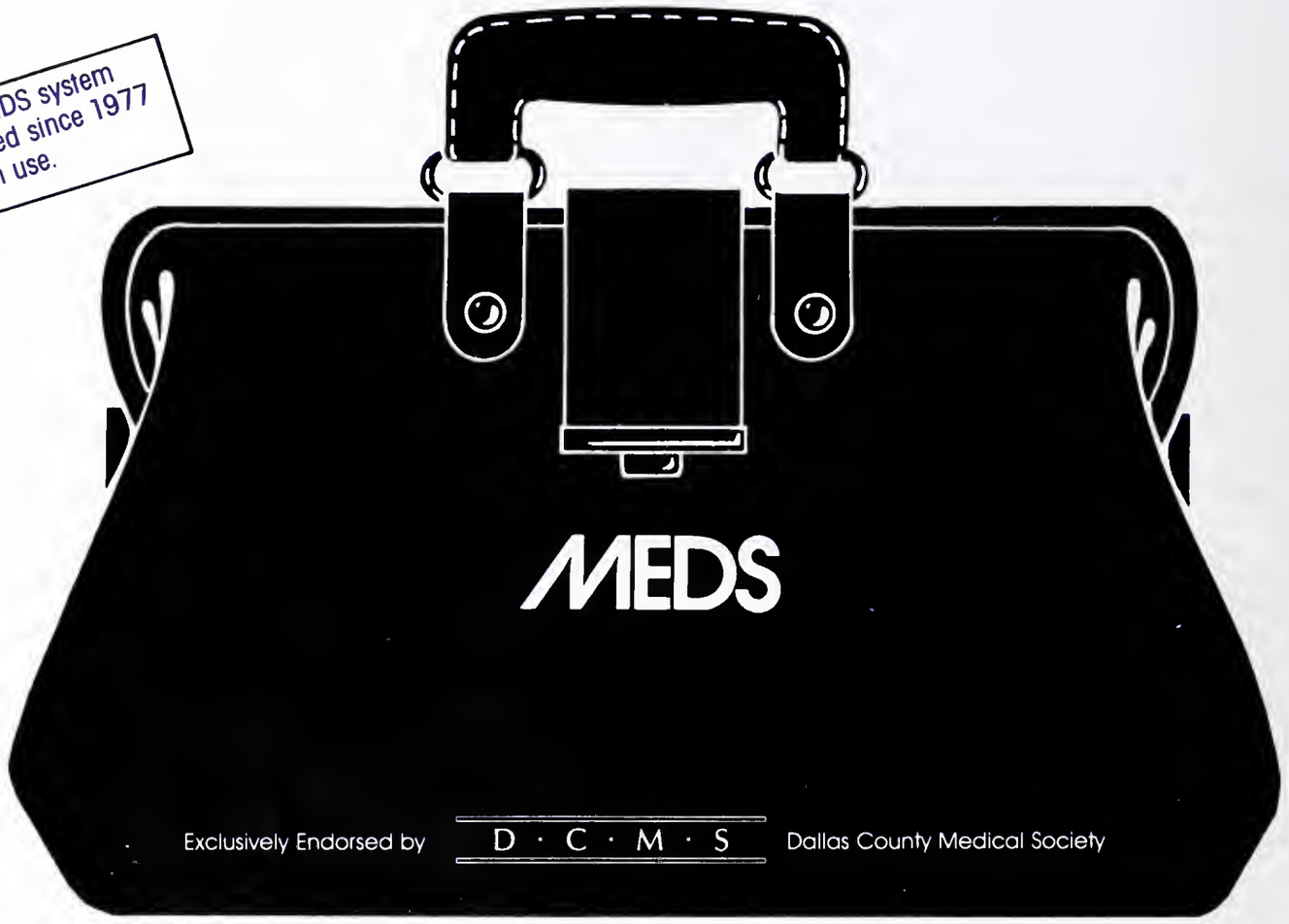
Two steps were required in order to compile the data on state government spending in health. The first step involved defining a health service expenditure. We defined a health service expenditure as any program or agency expenditure that had as its primary purpose the advancement of human physical or mental health. Thus, all agencies and programs involved in health service provision, financing, administration, regulation, research, and training were included. The standard data source was individual state agency legislative appropriation requests, which yielded historical expenditure data categorized by agency program area and disaggregated by method of finance. For a given year, these reports are obtainable from a single document: either the Legislative Budget Board Budget Recommendations or the Governor's Budget Recommendations.

The second step was to group these programmatic expenditures into the health expenditure categories. This required both aggregation and disaggregation of the budget data based on analyses and judgments regarding the specific nature of certain expenditures. In addition to the personal health care categories, government public health activity, and prepayment and administration, a new category for government spending for medical training and research was estimated because of its importance in the state budget. The expenditure data represent all state appropriated funds that are devoted to health care services. In addition to the expenditure of state tax revenues, expenditure of monies collected from the federal government, from local governments, and fees collected by state institutions are included. Thus, the data in this section show what Texas state government appropriates to health care, where it comes from, and where it goes.

Physicians Computerized Office Management System

WE MAKE HOUSE CALLS

Every MEDS system purchased since 1977 is still in use.



Exclusively Endorsed by D · C · M · S Dallas County Medical Society

MEDS will individually tailor an Office Management system to fit your practice needs. Texas based, MEDS has been satisfying the data processing needs of physicians across the Southwest for over eight years. MEDS systems help simplify and streamline the increasingly complex problem of managing your practice. Contact us so that we can show you all the ways your practice can benefit from a system of your own.

MEDS PROVIDES

- Electronic claims submissions
- State of the art hardware
- Ongoing service, support and training
- Patient scheduling and recall
- Insurance filing and tracking

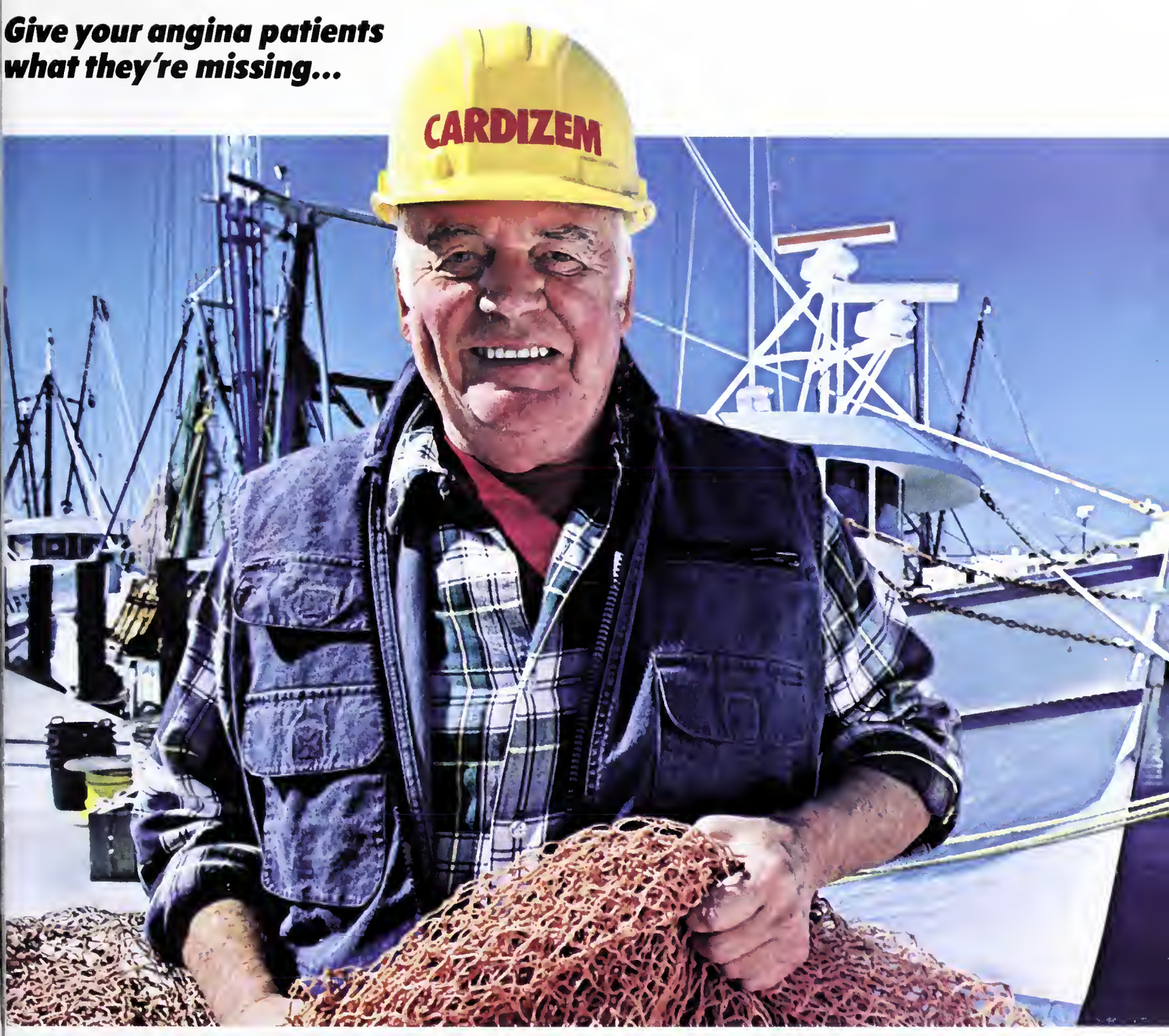
MEDS

Medical Data Systems, Inc.
Carporate Ottice Dallas
Ten Thausand Narth Central Suite 1000
Dallas, Texas 75231

In Texas call toll free 1-800-272-MEDS
Natianwide call toll free 1-800-922-MEDS
Dallas/Fart Warth Metra call 263-9812

San Antania Office
15600 San Pedra Suite 301
San Antanio, Texas 78232
(512) 490-0322

Give your angina patients what they're missing...



CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3]****
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

90 mg GREATER DOSAGE FLEXIBILITY NEW 120 mg

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl)
30 mg, 60 mg, 90 mg, and 120 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing.

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nitrendipine, and verapamil. Am Heart J 1983; 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesaway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

1403E7

Motrin® 800 mg TABLETS
ibuprofen

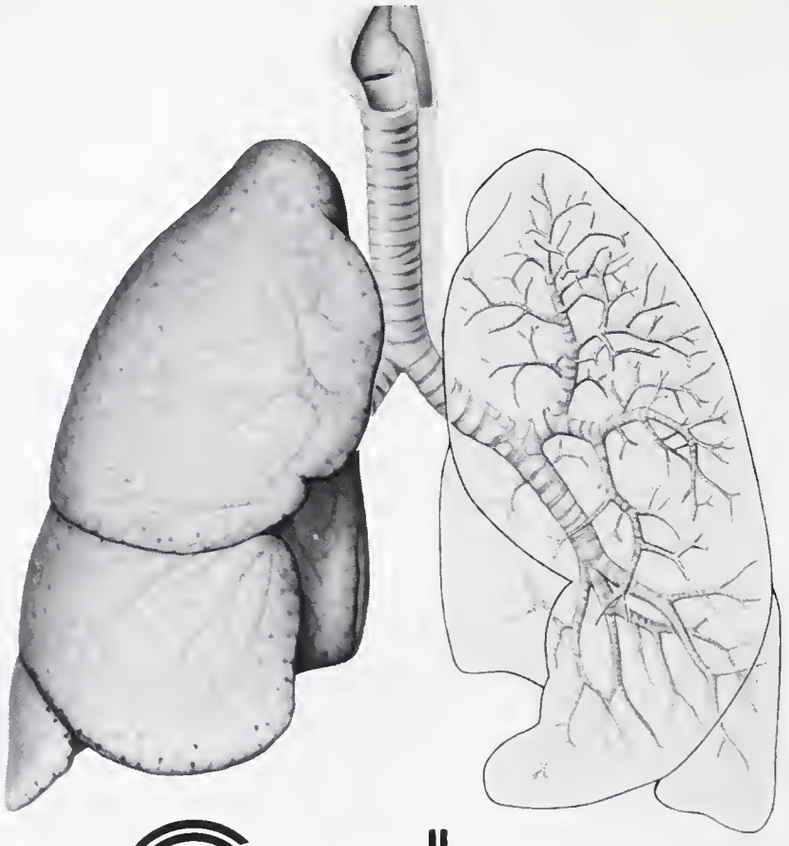
Extra strength
Convenience
Economy

Upjohn
A Century of Caring
1886·1986

©1986 The Upjohn Company

J-6138 January 1986

Consider the causative organisms...



Ceclor® cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULO BE AOMINISTEREO CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS ANO CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUOE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

|072886R|

PA 8794 AMP

©1987, ELI LILLY AND COMPANY

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

700241

Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

PEGGY B. SMITH, PhD
LAURILYNN McGILL, MPH

Teenage childbearing trends in Texas

Teenage pregnancy in Texas continues to be a significant problem in terms of its negative effects on the social, economic, and medical status of the mother and child. Although teenage fertility in Texas has declined in the past five years (1980–1984), our state's teenage fertility rate is substantially higher than the national average. Differences in fertility are highlighted for three groups (white non-Spanish surname, white Spanish surname, and black) and changes from previously reported trends are presented. Continuing high fertility rates for black and white Spanish surname teenagers along with population changes pose a challenge to health care providers.

Although 1.5 million US teenagers in 1979 visited family planning clinics and close to half a million obtained abortions, teenage fertility (live births to females 19 years of age or younger) continues to be a problem. More than 1.1 million teenagers became pregnant in 1979; 850,000 of those teenagers had not planned to become pregnant, and only 19% were married when they conceived (1). Between 1974 and 1980, the national teenage pregnancy rate (live births and legal abortions per 1,000 females 15 to 19 years old) rose by 8.2%; during this time the teenage fertility rate (live births per 1,000 females 15 to 19 years) dropped by 9.2% (2) while the abortion rate almost doubled. Similar patterns were observed in Texas (3). However, Texas trends from 1980 through 1984 suggest some divergence from previous patterns.

The purpose of this paper is to update data previously presented in this journal (3) and to summarize the recent Texas statistics concerning teenage fertility between 1980 and 1984. Comparisons also are made with 1970 Texas data to determine changes over the past 15 years. In order to establish Texas' position relative to the nation as a whole, comparisons are made between Texas and US statistics for 1983, the latest year available nationally.

Methods

Vital statistics data based on birth certificates were obtained from the Texas Department of Health for the years 1980 through 1984. Population figures were obtained from the Bureau of State Health Planning and Resource Development, Texas Department of Health. "Teenage" refers to females 19 years of age or younger. Teenage fertility (live births to females 19 years of age or younger) was analyzed for two age groups of teenagers: those 14 years or younger, and those 15 to 19 years old. Fertility rates (live births per 1,000 females) and other rates and ratios were calculated for the 15- to 19-year-old age group only, as is customary. The small number of births relative to the population of teenagers less than 15 years old makes calculation of rates and ratios for them less useful.

To estimate the number of unmarried females aged 15 to 19, the same proportion as that reported by Holck and Peter for 1977 data was applied to current population estimates (3). The number of abortions obtained by Texas teenagers was estimated by applying the national age distribution of women obtaining abortions reported by the Centers for Disease Control (4) to the number of abortions reported for Texas by the Alan Guttmacher Institute (5).

Findings

In 1984, 46,987 infants were born to Texas teenagers (females 19 or younger) (Fig 1). The number of live births to females aged 15 to 19 years had risen to 49,496 in 1982, but rapidly diminished to the mid-1970s level by 1984. Births to females 14 years of age or younger, however, have remained remarkably constant in the same decade (Fig 1). The proportion of live births to teenagers steadily declined from 20% of all live births in 1970 to 15.7% in 1984. Texas' 1983 rate of 16.4% was still higher than the 1983 national proportion of 13.7%.

The age-specific fertility rate of 15- to 19-year-old Texans dropped about 7% between 1980 and 1984, from 74.2 to 68.9. The 1984 rate is 19% lower than the rate in 1970 (Fig 1). Although the Texas fertility rate for 15- to 19-year-olds is decreasing, the 1983 Texas rate was still 38% higher than the comparable US teenage fertility rate for 1983 (6).

Births to white teenagers (15 to 19 years old) with non-Spanish surnames (WNSS) decreased 11.4% between 1980 and 1984 (Fig 2). Births to black 15- to 19-year-olds decreased 9.4%, and births to white 15- to 19-year olds with Spanish surnames (WSS) increased 1.6%. Fertility rates for these three groups declined over this period. The fertility rate dropped 10.0% for WNSS, 7.0% for blacks, and 5.9% for WSS. The rise in the number of births to WSS 15-to 19-year-olds, concurrent with a decline in the fertility rate, is explained by the 8.1% increase in the number of 15- to 19-year-old WSS females in the population since 1980. The number of black females in the same age group declined 2.6%, and WNSS females declined 1.5%. Long-term trends in population growth show even more dramatic changes. Since 1970, WNSS females 15 to 19 years old increased by 9.3%, blacks by 22.1%, and WSS by 84.3%.

The fertility rate among WSS females from 15 to 19 years old has not remained higher than the rate for blacks as reported by Holck and Peter (3). In 1980, the WSS rate was 102.7 and the black rate was 111.9. Although the gap narrowed in 1982 with a slight rise in WSS fertility, it widened again by

Peggy B. Smith, PhD, Associate Professor, Department of Obstetrics and Gynecology, and Laurilynn McGill, MPH, Research Coordinator, Teen Health Clinic, Department of Obstetrics and Gynecology, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.

1984 (Fig 2).

The number of births to teenagers continues to be directly related to the age of mother (Fig 3). Of the 1,088 births to females 14 years of age or younger in 1984, 22% were to WNSS, 37% to black, and 41% to WSS females. This represents a reversal of the proportions reported by Holck and Peter (3) for births to these younger WSS and black teenagers.

The latest abortion figures available were for 1982. Since they are not reported by age, estimates were based on national age distribution figures for women obtaining abortions (4), as described in the methods section of this article. We estimate the number of abortions to Texas teenagers for 1982 to be 30,000. The abortion ratio (number of abortions per 1,000 live births) is estimated to be 586. This is higher than the estimated ratio reported by Holck and Peter (3) for 1977, probably due in part to the use of different sources of data. The source we have used is based on direct surveys of providers and is probably a more accurate count. The latest national abortion ratio for teenagers (1981) has also risen since 1977.

The out-of-wedlock ratio was 798.9 per 1,000 births to blacks aged 15 to 19 in 1984, in contrast to 239.8 per 1,000 WNSS births and 271.1 per 1,000 WSS births. These ratios are higher than those reported by Holck and Peter, but black, WNSS, and WSS have not changed relative to each other (Fig 4).

1. Fertility rate for 15–19 year olds and live births to females under 15, Texas residents, 1970, 1975, 1980–1984.

Year	Female Population 15–19 Yrs	Live Births to 15–19 Year Olds	Fertility Rate 15–19 Year Olds	Live Births to Females Under 15 Yrs
1970	534,772	45,559	85.2	968
1975	604,582	45,878	75.9	1,099
1980	661,321	49,093	74.2	998
1981	661,776	48,765	73.7	987
1982	662,737	49,496	74.7	1,089
1983	664,158	47,259	71.2	1,076
1984	662,120	45,899	68.9	1,088

Source: Texas Department of Health.

Discussion

Although the Texas teenage fertility rate has declined over the past 15 years, following the national teenage fertility patterns, the state's teenage fertility rate is well above the national average. One possible explanation is found in this state's population mix and the increasing proportion of female teenagers with Spanish surnames. The Spanish surname group is a heterogeneous collection of individuals of differing nationalities and cultural heritages; however, 96% of all Texas births to women with Spanish surnames are of Mexican origin (8). Moreover, the national fertility rate of women of Mexican origin was 56% higher than the rate for non-Hispanics in 1982 (8). In addition to the increase in the Hispanic teenage population, one half of all Hispanic women migrating to the US through Texas are 18 years of age or under, a period of prime fertility. These migratory patterns among a highly fertile group have a subtle but important impact on teenage pregnancy rates in the US. While Texas is an initial point of entry, the migration will eventually affect the national population mix and, in turn, the types of services that are needed. These trends, if they continue, suggest that public maternity services, not only in Texas, but across the country will be dominated by cohorts of young fertile Hispanic women. Such groups may require different patterns of health care delivery to effectively bring about positive health care changes. Health care providers should adapt health care educational practices and patient management skills to the lifestyle factors associated with these groups. The role of the family and degree of acculturation should be considered by health care providers when services are designed for specific groups.

Attention focused on the WSS teenagers should not overshadow the high fertility rate of black teenagers. This group had the highest fertility rate and the highest out-of-wedlock ratio of the three groups studied. The lack of abortion data and lack of information on how many of these pregnancies were intended makes it difficult to assess whether black teenagers do not access family planning services due to inadequate provision of such services, bar-

2. Age-specific fertility rates for 15–19 year olds by white non-Spanish surname, white Spanish surname, or black, Texas residents, 1970, 1975, 1980–1984.

	White Non-Spanish Surname			White Spanish Surname			Black		
Year	Female Population	Live Births	Fertility Rates	Female Population	Live Births	Fertility Rates	Female Population	Live Births	Fertility Rates
1970	363,746	24,043	66.1	96,253	10,986	114.1	74,773	10,530	140.9
1975	403,659	20,822	51.6	115,183	14,421	125.2	85,740	10,635	124.0
1980	403,398	21,739	53.9	164,160	16,858	102.7	93,763	10,496	111.9
1981	401,450	21,593	53.8	167,231	17,212	102.9	93,095	9,960	107.0
1982	399,806	21,754	54.4	170,465	17,917	105.1	92,466	9,825	106.3
1983	398,452	20,419	51.2	173,829	17,292	99.5	91,877	9,548	103.9
1984	397,421	19,256	48.5	177,382	17,135	96.6	91,317	9,508	104.1

riers to receipt of the services, or desire for the pregnancies. Further study of factors contributing to high black teenage fertility is needed.

Our data also underscore the need for further research in the area of childbearing among the very young. While regionally the births to younger teenagers (14 years or younger) may reflect the population shift due to Hispanic migration, during the past 15 years parallel data are reported for the US as a whole. Unfortunately, statistics for the younger pregnant teenager remain relatively unchanged. Interventions used with 15- to 19-year-olds seem ineffective in lowering the fertility of younger teenagers. Further research is needed to identify factors that act as barriers to the younger teen in primary birth prevention.

3. Live births by age of mother (under 20) and white non-Spanish surname, white Spanish surname or black, Texas residents, 1984.

Age	White, Non-Spanish Surname	White, Spanish Surname	Black	Total
Under 12	0	1	0	1
12	6	11	10	27
13	38	89	70	197
14	195	348	320	863
15	769	1,100	745	2,614
16	1,954	2,310	1,352	5,616
17	3,499	3,492	1,895	8,886
18	5,474	4,630	2,483	12,590
19	7,557	5,603	3,033	16,193
Total	19,495	17,584	9,908	46,987

4. Unmarried females 15–19, out of wedlock births to females 15–19, out of wedlock ratio, and out of wedlock rate, by white non-Spanish surname, white Spanish surname, or black, Texas residents, 1984.

Ethnicity	Unmarried Females 15–19*	Out of Wedlock		
		Live Births	Ratio†	Rate‡
WNSS	308,001	4,618	239.8	15.0
WSS	155,564	4,645	271.1	29.8
Black	78,807	7,596	798.9	96.4
Total	542,372	16,859	367.3	31.1

Source: Texas Department of Health
* Estimated using same proportions as Holck & Peter, 1980.
† Ratio = Out of wedlock live births 15–19 × 1,000; live births 15–19.
‡ Rate = Out of wedlock live births 15–19 × 1,000; unmarried female population 15–19.

REFERENCES

1. Dryfoos JG, Bourque-Scholl N: Factbook on Teen Pregnancy. New York, Alan Guttmacher Institute, 1981.
2. Teenage pregnancy and fertility trends—United States, 1974, 1980. MMWR 34(19):277–280, 1985.
3. Holck SE, Peter WP Jr: Teenage pregnancy in Texas. Tex Med 76(9):56–60, 1980.
4. Binkin NJ, Lang PR, Rhodenhiser EP, et al: Abortion surveillance, 1981. MMWR, CDC Surveill Summ 33(3):1SS–8SS, 1984.
5. Henshaw SK, Forrest JD, Blaine E: Abortion services in the United States, 1981 and 1982. Fam Plann Perspect 16(3):119–127, 1984.
6. National Center for Health Statistics: Advance Report of Final Natality Statistics, 1983. Monthly Vital Statistics Report 34(6) Suppl DHHS Pub No (PHS) 85–1120, Public Health Service, Hyattsville, MD, Sept 20, 1985.
7. Pratt WF, et al: Understanding US fertility: findings from the National Survey of Family Growth, cycle III. Population Bulletin 39(5):1984.
8. Ventura SJ: Births of Hispanic Parentage, 1982. Monthly Vital Statistics Report 34(4) Suppl DHHS Pub No (PHS) 85–1120. Public Health Services, Hyattsville, MD, July 23, 1985.

ACKNOWLEDGMENTS

The authors gratefully acknowledge Debbie Ford for typing the manuscript and Susan Franzheim and the Franzheim synergy Trust for their support.

TERRY C. McMAHON, MD

Emotional distress and psychosocial adaptation in cancer patients

Terry C. McMahon, MD, Assistant Professor, Department of Psychiatry, School of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX 79430.

Interest in the psychosocial and psychiatric aspects of oncology has grown in the 1980s. This article reviews selected literature relating to the nature of the psychosocial and emotional distress experienced by cancer patients; variables that affect psychosocial distress and adaptation, including diagnosable psychiatric disorders; the psychosocial impact of longer-term survival; and strategies for psychosocial and psychotherapeutic intervention. A goal of this article is to enhance the clinician's understanding of the nature and significance of psychosocial distress in cancer patients and the interventions that may be useful in addressing these problems.

During the 1980s there has been increased interest in the psychiatric and psychosocial aspects of oncology and cancer care. This can be related to several factors, including improved five-year survival rates for cancer patients, and an increasing number of longer-term cancer survivors (1). Hence, in this area of research and clinical care the emphasis has shifted from a narrow focus on terminal illness to a somewhat broader focus which involves seeing the cancer patient as the paradigm of the individual with chronic medical illness. The purpose of this article is to review selected aspects of the literature which focus upon the emotional distress experienced by cancer patients and to discuss some of the important issues related to their psychosocial adjustment and psychosocial care.

Psychosocial distress and concerns in the cancer patient

One of the most common immediate responses by patients and families to the diagnosis of and treatment for cancer is fear. As noted by Holland (2), this can involve fear of death, of the uncertainty of one's future and clinical course, of progressive pain, and of loss of a body part or function. Other important concerns often relate to perceived threats to occupational, sexual, and family functioning, as well as a fear of financial burdens that may overwhelm individual or family resources. Much of this type of response has been related to the view of cancer as an essentially untreatable illness. However, as survival rates and remission duration have increased, there have been more opportunities to discover how these concerns and levels of distress evolve over time.

Wellisch et al (3) studied the psychosocial problems of homebound cancer patients with advanced disease. In this retrospective study of 570 very ill cancer patients, 30% reported concerns about pain and somatic side effects of illness and treatment. The most frequent concerns following this were mood disturbance (15%), problems with medical equipment used in the home (8%), problems with the impairment of family relationships (7%), and concerns about cognitive impairment (6%). This literature suggests that patients and their families can have a variety of different concerns that run the gamut from the emotional and existential to the physical, sexual, and material impact of the disease and its treatment. Hence, when addressing these issues with patients, it is important to avoid assumptions that stereotype cancer patients and their concerns and to remain mindful of how emotional distress and areas of concern may change with the stage of the illness.

Factors affecting psychosocial distress and adaptation

Related to these issues is the concept of how individuals cope with cancer and its treatment, particularly on a longer-term, more chronic basis. A variety of factors can have an impact in this regard. With respect to the demographic variables, Novotny et al (4) noted that being physically sicker and more socially isolated can adversely affect coping; that younger patients may react more acutely and dramatically but can also offset this with greater occupational and social activity; and older patients, though more preoccupied with bodily changes and physical restrictions, may offset these effects with a calmer, more philosophical approach.

From a psychological perspective, Peck (5) has also commented on the significance of psychological defense mechanisms that cancer patients may employ. While denial is used by some patients, he notes that total denial is uncommon and that many patients use a variety and series of defenses. These might include displacement, intellectualization, isolation of affect, and identification with the physician, all of which can help patients minimize emotional distress and foster a sense of control and mastery. Worden and Sobel (6) noted that a positive adaptation to cancer appeared related to higher ego strength as measured by The Barron Ego-Strength Scale (an MMPI subscale). They related this to the importance of enhancing cognitive skills in coping with cancer.

Regarding advanced disease Davies et al (7) noted that, in advanced disease, patients with mild organic impairment may actually show better psychological adaptation. Holland (8) noted how progressive disease and the distress associated with it can prompt patients and families to seek unproven remedies. She noted the importance of understanding the emotional basis for this and advised health care providers to avoid judgmental or punitive responses. Finally, as noted by Bloom (9), it may also be important to analyze the extent to which a pa-

tient whose illness follows a more chronic course experiences good support from family, friends, and peers, as well as health care providers. For instance, if the patient's family and health care providers appear to view emotional distress and financial concerns as inappropriate or uncomfortable topics for discussion, the patient's resulting effort to suppress these may lead to an inappropriate use of denial and minimization.

Impact of psychiatric disorders

In addition, diagnosable psychiatric disorders also contribute significantly to psychosocial and emotional distress in cancer patients. In general, the studies of diagnosable psychiatric disorders in cancer patients have focused on the importance of delineating types of psychiatric symptoms as well as clinical syndromes and disorders.

Craig and Abeloff (10), in their study of 30 consecutive inpatient admissions using a symptom checklist (SCL-90), reported significant elevations on scales for depression (53% of the population), anxiety (30%), and somatization (43%). Similar findings using the SCL-90 were reported by Farber et al (11). Levine et al (12), in their description of 100 patients who were referred for psychiatric consultation, noted that approximately half were depressed, while 40% were diagnosed as having an organic mental disorder. Many of this latter group were at referral thought to be depressed rather than cognitively impaired.

In a study by Derogatis et al (13), 53% of 215 inpatients and outpatients had no psychiatric diagnosis. Of the remaining 47%, 32% were diagnosed as having adjustment disorders while 6% were diagnosed as having major depression, 4% as having organic mental disorder, 3% as having a personality disorder, and 2% as having an anxiety disorder. In another study, Massie et al (14) reviewed psychiatric diagnoses on oncology inpatients for whom psychiatric consultation was requested. In the consultation population (5% of the total oncology admissions over one year), approximately two thirds were diagnosed as having an adjustment disorder with depressive or anxious symptoms, while 10% were diagnosed as having a superimposed major depression, and 25% were diagnosed as having an organic mental disorder (usually delirium or dementia). Hence, these studies suggest that most cancer patients probably do not meet the criteria for a diagnosable psychiatric condition, that approximately one half to two thirds of the patients with diagnosable psychiatric disorders have adjustment disorders that probably will respond to short-term supportive psychotherapeutic and/or psychopharmacologic interventions, and that depression and organic mental disorders comprise the majority of the remainder.

With respect to these reports, several points warrant emphasis. As noted by Silberfarb et al (15), delirium and dementia are often underdiagnosed. This population may be particularly predisposed due to the underlying illness, the impact of radiation and chemotherapy, and the infectious, endocrine, and metabolic complications that may ensue (16,17). Since, by definition, these syndromes are due to organic factors, changes in cognitive and intellectual functioning can often signal a change in condition that may warrant prompt intervention in order to limit further deterioration. Hence, clinicians must be alert to recognize and address these conditions.

Diagnosing major depression in cancer patients can be particularly difficult since the differentiation between major depression and an organic affective syndrome due to the somatic effects of the illness and treatment can be a difficult distinction (18). A recent article by Bukberg et al (19) stated that an increased severity of depression seemed to be associated with an increased physical disability (Karnosky less than 40) and that the cognitive features of depression (feelings of helplessness, hopelessness, worthlessness, and failure), diminished mood reactivity, sleep disturbance, and suicidal ideation were more helpful than somatic symptoms and impaired energy in differentiating the depressed from nondepressed group. These data are consistent with the reports by Cavanaugh (20) regarding the diagnosis of depression in patients with other chronic medical conditions. Hence, this literature emphasizes the importance of focusing on sleep changes, cognitive changes, and lack of mood reactivity instead of physical symptoms per se when considering a diagnosis of major depression.

Psychosocial adaptation and long-term survival

As survival rates and the number of tumors susceptible to remission have increased, there has been an increasing focus on the well-being of the longer-term survivor of cancer. The existing literature is somewhat sparse, and a variety of findings have been reported. Several retrospective, noncontrolled reports (21–23) have suggested that the majority of longer-term survivors demonstrate good psychosocial adjustment, a positive attitude toward life, and no overt increased incidence in prominent psychiatric symptomatology. However, these reports also noted a tendency in a minority toward early retirement and disability (22) and chronic depression (23). Schmale et al (24) reported on another group of 104 cancer survivors more than three years past their last cancer treatment. These patients were drawn from populations at three different centers and were studied using the General Well-Being Measure from the Rand Health Insurance Study (25). They compared the results in this

sample to physically healthy controls matched for age, sex, and education. They noted in the cancer group a decreased sense of self-control and more general health worries than the control sample but reported that the groups did not differ on other measures of general medical and mental well-being. They also did not differ on scales measuring anxiety, depression, and positive well-being.

Though these studies seem to suggest, in general, a good adjustment for cancer survivors and a relative lack of significant psychopathology following cancer treatment, many of these reports may be criticized for being nonprospective and noncontrolled. In addition, many of these studies have used scales that may not be optimally sensitive to clinically significant anxiety and/or depression. Hence, additional data would be helpful in this area. Studies that are prospective and controlled and that utilize clinical scales may be particularly useful in further refining our understanding of the psychosocial sequelae of longer-term survival.

Psychosocial and psychotherapeutic interventions

A number of different techniques and approaches have been described. These include supportive psychotherapy on an individual basis, group therapy, and visualization with imagery (26). While positive results have been recorded using an approach such as group therapy in a randomized, prospective design (27), as noted by Greer and Silberfarb (26), many of these studies are primarily descriptive, largely uncontrolled, and are based on selective patient samples.

Regarding the use of psychotherapeutic interventions in cancer patients, Worden (28) has described the importance of the identification of the patient at risk for high levels of emotional distress and the usefulness of a time-limited, problem-solving approach that is more individualized and personalized for specific patients. Another recent study compared the effects of psychotherapy on the emotional and physical distress during radiotherapy. Forester et al (29) studied 100 patients, 48 of whom were randomly assigned to weekly supportive psychotherapy for ten weeks. In the group that received psychotherapy, the authors noted an initial reluctance by patients to discuss matters of concern. However, they also note that after this initial resistance, these patients did engage in subsequent supportive sessions that ultimately contained a variety of supportive, educational, interpretive, and cathartic elements. The authors reported a statistically significant decrease in the emotional psychological distress in the psychotherapy group compared to the control group of 52 patients who received no psychotherapy. In this study the authors in particular noted the importance of a more interactive, directive approach that encouraged patients to focus on their distress in a "here and now" manner.

Conclusion

As cancer survival rates have increased, cancer has emerged as a paradigm of chronic disease. Hence, as more patients survive for longer periods of time, the greater the opportunity becomes to delineate and characterize not only the emotional distress and psychosocial concerns of the acute phase, but also those of the more chronic phases of the illness.

This brief discussion is neither exhaustive nor definitive regarding emotional distress and psychosocial adaptation in cancer patients. Nevertheless, important clinical and therapeutic points are suggested by these articles. First, while many patients are relatively free of emotional distress and require little psychosocial or psychiatric intervention, a notable minority may develop significant levels of distress that warrant specific interventions. Second, in this latter group, the distress experienced can be a function of multiple factors. Hence, any assessment that unduly focuses on psychological and social factors to the exclusion to disease-related organic factors and diagnosable psychiatric disorders will likely be deficient. Third, in the absence of specific organic or psychiatric disorders, which will likely require specific biological or pharmacological interventions, emotional and psychosocial distress may be alleviated by specific psychotherapeutic approaches that are pragmatic, problem-oriented, and time-limited and that include the concentrated participation of therapists and patients. Fourth, given the broad range of factors that can affect psychosocial distress in adaptation, any tendency to stereotype cancer patients or their concerns must be avoided. As the knowledge in this area of cancer care continues to expand, we likewise improve our ability to address and relieve more effectively and efficiently the emotional and psychosocial problems that some patients experience in the course of cancer.

REFERENCES

1. Massie M, Holland J: Psychiatry and oncology, in Psychiatry Update, vol 3. Washington, DC, American Psychiatric Association Press, Inc, 1984, pp 239–256.
2. Holland J: Coping with cancer: a challenge to the behavioral sciences, in Cullen JW, Fox BH, Isom RN (eds): Cancer: The Behavioral Dimensions. New York, Raven Press, 1976, pp 263–268.
3. Wellisch D, Landsverk J, Guidera K, et al: Evaluation of psychosocial problems of the homebound cancer patient: 1. Methodology and problem frequencies. Psychosom Med 45(1):11–21, 1983.
4. Novotny ES, Hyland JM, Coyne L, et al: Factors affecting adjustment to cancer. Bull Menninger Clin 48(4):318–328, 1984.
5. Peck A: Emotional reactions to having cancer. Am J

Roentgenol Radium Ther Nucl Med 114(3):591–599, 1972.

6. Worden JW, Sobel HJ: Ego strength and psychosocial adaptation to cancer. Psychosom Med 40(8): 585–592, 1978.

7. Davies RK, Quinlan DM, McKegney FP, et al: Organic factors and psychological adjustment in advanced cancer patients. Psychosom Med 35(6):464–471, 1973.

8. Holland JC: Why patients seek unproven cancer remedies: a psychological perspective. CA 32(1):10–14, 1982.

9. Bloom JR: Social support, accommodation to stress and adjustment to breast cancer. Soc Sci Med 16(14): 1329–1338, 1982.

10. Craig TJ, Abeloff MD: Psychiatric symptomatology among hospitalized cancer patients. Am J Psychiatry 131(12):1323–1327, 1974.

11. Farber J, Weinerman B, Kuypers J: Psychosocial distress in oncology outpatients. J Psychosocial Oncology, 2:109–118, 1984.

12. Levine PM, Silberfarb PM, Lipowski ZJ: Mental disorders in cancer patients: a study of 100 psychiatric referrals. Cancer 42(3):1385–1391, 1978.

13. Derogatis LR, Morrow GR, Fetting J, et al: The prevalence of psychiatric disorders among cancer patients. JAMA 249(6):751–757, 1983.

14. Massie MJ, Gorzynski G, Mastrovito R, et al: The diagnosis of depression in hospitalized patients with cancer, meeting abstract. Proc Am Assoc Cancer Res 20:432, 1979.

15. Silberfarb PM, Philibert D, Levine PM: Psychosocial aspects of neoplastic disease: II. Affective and cognitive effects of chemotherapy in cancer patients. Am J Psychiatry 137(5):597–601, 1980.

16. Peterson LG, Popkin MK: Neuropsychiatric effects of chemotherapeutic agents for cancer. Psychosomatics 21(2):141–153, 1980.

17. Stolinsky DC: Paraneoplastic syndromes. West J Med 132(3):189–208, 1980.

18. Fernandez F, Adams F, Levy J, et al: Depression and cancer: an update. Tex Med 82(7):46–49, 1986.

19. Burkberg J, Penman D, Holland JC: Depression in hospitalized cancer patients. Psychosom Med 46(3): 199–212, 1984.

20. Cavanaugh S, Clark DC, Gibbons RD: Diagnosing depression in the hospitalized medically ill. Psychomatics 24(9):809–815, 1983.

21. Kennedy BJ, Tellegen A, Kennedy S, et al: Psychological response of patients cured of advanced cancer. Cancer 38(5):2184–2191, 1976.

22. Danoff S, Kramer P, Irwin P, et al: Assessment of the quality of life in long-term survivors after definitive radiotherapy. Am J Clin Oncol 6:339–345, 1983.

23. Shanfield SB: On surviving cancer: psychological considerations. Compr Psychiatry 21(2):128–134, 1980.

24. Schmale AH, Morrow GR, Schmitt MH, et al: Well-being of cancer survivors. Psychosom 45(2):163–169, 1983.

25. Brook RH, Ware JE Jr, Davies-Avery A, et al: Overview of adult health status measures fielded in Rand's Health Insurance Study. Med Care 17:1–130, 1979.

26. Greer S, Silberfarb PM: Psychological concomitants of cancer: current state of research. Psychol Med 12(3): 563–573, 1982.

27. Spiegel D, Bloom JR, Yalom I: Group support for patients with metastatic cancer. A randomized outcome study. Arch Gen Psychiatry 38(5):527–533, 1981.

28. Worden JW: Teaching adaptive coping/Self-Help, meeting abstract. Psychological, Social, and Ethical Issues on Human Values and Cancer: April 23–25, 1981, Washington, DC, American Cancer Society, 1981, pp 129–137.

29. Forester B, Kornfeld DS, Fleiss JL: Psychotherapy during radiotherapy: effects on emotional and physical distress. Am J Psychiatry 142(1):22–27, 1985.

American Physicians Insurance Exchange

MALPRACTICE

It's an allegation that can happen to anyone.

You don't have to stand alone!

We wrote the book on malpractice insurance. We started writing professional liability insurance over 12 years ago, when the other insurance companies were looking for a way out.

Why? Because we're 100% owned and controlled by dentists and physicians. We know you can't operate your practice without malpractice insurance.

We know a good insurance company must insure *all* specialties. And we have never settled a claim without an insured's written consent. We believe that you shouldn't have to stand alone. If you're concerned about your insurance company's commitment to you, give us a call today.

1301 Capital of Texas Highway, Suite #B-300
Austin, Texas 78746
(512) 328-1520

Nationwide 1-800-252-3628

In San Antonio:
Bill Sweet
(512) 497-3205

RANDOLPH W. EVANS, MD

Postconcussive syndrome: an overview

The postconcussive syndrome refers to a large number of symptoms that may occur singly or in combination following usually minor head trauma. Headaches, dizziness, blurred vision, memory impairment, and anxiety are the most common symptoms. Neuropathological findings, natural history studies, and neurophysiological testing have all supported an organic basis for the syndrome. Premorbid personality and a variety of psychological factors can influence the presentation. Neurophysiological and neuropsychological testing and neuroimaging can be helpful when indicated. A variety of drug and psychological treatments can be beneficial in restoring the patient to full function with time. Education of the patient, family, and other involved persons is beneficial.

The postconcussive syndrome refers to a number of symptoms and signs that may occur singly or in combination following usually minor closed head trauma. Loss of consciousness does not have to occur for the postconcussive syndrome to develop. The postconcussive syndrome has been recognized for at least the last few hundred years. Boyer in 1822, Astley Cooper in 1827, and Dupuytren in 1839 all described the concept of cerebral concussion with persistent symptoms. In 1879 Rigler raised the important issue of "post-compensation neurosis" when he described the increased incidence of post-traumatic invalidism after a system for financial compensation was established for accidental injuries on the Prussian Railways. One interesting historical case involved a 26-year-old maid who had been hit over the head with a stick. She complained of retrograde amnesia. Six months later she was complaining of headaches, dizziness, tinnitus, and tiredness. A judge requested the opinion of a specialist who stated: "We can't say anything definite, but it is certain that this will leave its mark in the form of an impediment" (1). Swiss physician J. J. Wepfer made this statement in 1694. This article reviews the symptoms and signs of the postconcussive syndrome, pathophysiology, testing, and treatment and will assess what sophistication we have gained almost 300 years later in dealing with this important problem.

Head trauma is a cause of significant morbidity and mortality. It has been estimated that there may be more than 10 million cases of all degrees of head trauma in the United States yearly (2,3). The causes of head trauma may vary quite a bit depending upon the locale. For an industrialized country such as the United States, the relative causes of head trauma occur as follows: motor vehicle accidents, 45%; occupational, 10%; recreational, 10%; falls, 30%; and assaults, 5%. By comparison, in the People's Republic of China, traffic-related accidents accounted for 31.7%, but most of these were bicycle accidents (4). The postconcussive syndrome may be comprised of one or more of the following symptoms and signs: headache, dizziness, vertigo, tinnitus, blurry vision, diplopia, convergence insufficiency, memory dysfunction, impaired concentration, personality change, anxiety, depression, sleep disturbance, decreased libido, irritability, noise and light sensitivity, fatigue, and slowed information processing (Fig 1). Seizure disorders can be a sequela of all degrees of head trauma (5). The risk of a post-traumatic seizure in one population study was .8% within five years in adults after mild head trauma without a skull fracture (6).

Headache types

A variety of headache types may be seen following head trauma. Headaches have been estimated in different studies to occur 12% to 80% of the time after mild head trauma. Post-traumatic headaches include the following: vascular and muscle contraction types; occipital or supraorbital neuralgia, associated with temporomandibular joint syndrome; post-traumatic dysautonomic cephalgia; and dysesthesias over scalp lacerations.

Vascular headaches are typically throbbing and may be worse with movement, coughing, or bending over. The headaches may be associated with nausea, vomiting, light and noise sensitivity, and vertigo. After head trauma, some patients may develop for the first time typical migraines or exacerbation of preexisting migraine. The headaches may occur in a variety of locations, including gener-

1. Symptoms in post-concussive syndrome

Headaches
Muscle contraction type
Migraine
Occipital neuralgia
Secondary to neck injury
Secondary to temporomandibular joint syndrome
Due to scalp lacerations or local trauma
Mixed
Dizziness
Vertigo
Tinnitus
Blurry vision
Diplopia
Memory dysfunction
Impaired concentration
Personality change
Anxiety
Depression
Sleep disturbance
Decreased libido
Irritability
Noise and light sensitivity
Fatigue
Slowed information processing

Randolph W. Evans, MD, Clinical Instructor in Neurology, Baylor College of Medicine; Assistant Clinical Professor of Neurology, The University of Texas Medical School at Houston, 1213 Hermann Dr, #380, Houston, TX 77004.

alized, nuchal-occipital, hemicranial, bifrontal, and temporal.

Muscle contraction headaches may occur in a variety of distributions including generalized, nuchal-occipital, bifrontal "cap-like," or "headband." These headaches are typically of the pressure type. Post-traumatic muscle contraction headaches may be constant and may be present for quite prolonged periods of time. Head injuries very commonly occur together with neck trauma. Cervical sprains, disc disease, or exacerbation of preexisting spondylosis may result. The headaches may be caused by the neck pathology rather than being due directly to the head injury.

Several types of neuralgia may be seen following head trauma. Rarely supraorbital neuralgia can result when there is injury to the supraorbital branch of the first trigeminal division as it passes through the supraorbital foramen just under the medial eyebrow. Patients may complain of shooting, tingling, or burning pain over the frontal area. Occipital neuralgia is seen very commonly following head trauma. The greater occipital nerve, which is primarily the cutaneous branch of the dorsal ramus of C2, lies halfway between the mastoid and the inion just inferior to the superior nuchal line of the occipital bone. The greater occipital nerve supplies sensation for the posterior scalp. At its exit point, the greater occipital nerve passes through an aponeurotic sling of the trapezius muscle. Occipital neuralgia may occur from direct trauma to the nerve with a blow to the back of the head. Conversely, occipital neuralgia may be associated with muscle spasm of the posterior neck. In occipital neuralgia there may be shooting or burning type pain which may shoot up over the occipital scalp and sometimes be felt in the temporal, parietal, or frontal area. Some patients may complain of paroxysms of pain lasting only seconds at a time. Other patients may complain of an associated dull aching lasting many hours. Occipital neuralgia can at times be bilateral.

Post-traumatic temporomandibular joint disease can cause headaches. The patients may complain of associated hemicranial or temporal muscle contraction headaches. On examination there may be evidence of tenderness to palpation of the temporomandibular joint, popping or clicking, or decreased opening of the jaw. Dental referral and appropriate treatment may then remedy the secondary muscle contraction type headaches.

A rare type of post-traumatic headache follows injury to the anterior triangle of the neck or the carotid sheath. This has been termed post-traumatic dysautonomic cephalgia (7). Complaints may include local pain and tenderness in the anterior triangle followed weeks and months later by severe unilateral frontotemporal headache, ipsilateral increased sweating of the face, dilatation of the ipsilateral pupil, blurred vision, photophobia in the ipsilateral eye, and nausea. The headaches may occur a few times per month and may last anywhere from hours to days.

Finally, dysesthesias over scalp lacerations occur frequently. There may be complaints of aching or soreness over the laceration or over the site of the original trauma even without a laceration. The dysesthesias, scalp tenderness, or aching may persist for weeks or months but rarely persist for more than one year. Local injections of lidocaine may be helpful in resolving the symptoms.

To summarize, a variety of headache types may occur after head trauma. The headaches may be continuous or episodic. Many patients have more than one type of headache. Not infrequently, patients have headaches with both muscle contraction and vascular elements, which are termed mixed headaches.

Pathogenesis and natural history

There continues to be a great deal of controversy over the pathogenesis of the postconcussive syndrome. Theories proposed include tissue damage with or without a psychological contribution, an entirely psychological cause, and compensation neurosis or malingering. In 1961 Henry Miller summarized the viewpoint of those who believe the postconcussive syndrome is really a compensation neurosis. He stated, " . . . the most consistent clinical feature (of the postconcussive syndrome) is the subject's unshakable conviction of unfitness for work" (8,9). The opposing viewpoint that the postconcussive syndrome has a clearly organic basis was well stated by Sir Charles Symonds in 1962. He wrote, "It is questionable whether the effects of concussion, however slight, are ever completely reversible" (10). A number of lines of evidence produced in the past 25 years make an excellent case for a definite organic basis. A recurring criticism by those who believe in the compensation neurosis hypothesis is that physical examination and laboratory testing are invariably normal. There are several studies that refute this. Pathological material has rarely been obtained of mild head trauma. A 1968 report of a neuropathological case described a man who was stunned but remained conscious immediately after he suffered a mild head injury. He had both retrograde and post-traumatic amnesia for about 15 minutes. Neurological examination findings were entirely normal, and there was no evidence of skull fracture. The patient died with pneumonia that occurred as a result of multiple rib fractures. The autopsy revealed a small post-traumatic lesion in the midbrain. Nine blocks taken from various parts of the brain all showed evidence of at least one microglial cluster, which is evidence

for recent trauma (11). Neuropathological changes have also been seen in animal experiments with mild head trauma (12).

In recent years, some neurophysiological data have shown abnormalities following mild head trauma. A 1984 report from Waddell and Gronwall documented increased sensitivity to light following mild head trauma (13). Another 1984 study, by Montgomery et al, studied 26 patients with mild head trauma. Fifty percent showed a delay of the wave I-V interval in brainstem evoked responses within 24 hours of injury. The majority showed persistence of the delay when the study was repeated six weeks later (14).

Finally, natural history studies make a very strong case for an organic basis. Guthkelch in 1980 reported a large series of 398 patients who all had compensation claims (15). However, even in this biased population, only 6.8% were thought to have an accident neurosis or to be malingering. Accident neurosis was found to be more frequent in semiskilled or unskilled manual workers sustaining industrial accidents than when the same occupation group had been involved in vehicular accidents outside their employment. Merskey and Woodforde in 1972 compared two groups of patients, one with compensation claims and the other without compensation claims (16). They found that both groups had similar symptoms and that both groups had improvement with time. Of interest, the symptoms did persist after settlement of litigation. Rimel et al in 1981 reported on 424 patients with minor head trauma (17). The patients underwent follow-up examination three months after injury. Seventy eight percent had persistent headaches, 59% had complaints of memory deficits, and 34% were unemployed. Out of this population, only six out of the 424 reported ongoing litigation. There was a dramatic discrepancy among occupations of patients returning to work. All of the executives and business managers returned to work within the three-month period. However, only 68% of skilled laborers and 57% of unskilled laborers were back to work after three months. Finally, Denker in 1944 studied 100 cases of cerebral concussion (18). He found that headaches, dizziness, and nervous instability persisted for more than one year in one third and for more than three years in 15%. There was no loss of consciousness in 20% of these cases. The persistence and severity of symptoms was not necessarily diminished with time.

Testing

A great number of tests when used judiciously may be helpful in postconcussive syndrome. Skull roentgenograms have an extremely low yield but continue to be performed, especially in the emergency room setting, on an extremely frequent basis. A CAT scan of the brain can certainly be helpful to exclude a subdural or epidural hematoma, cerebral contusion, or intracerebral hemorrhage. Patient selection for CAT scans is an unsettled issue. If a patient has a focal deficit or persistent nausea, vomiting, personality change, etc, a CAT scan is certainly indicated. However, there is no way to preselect the occasional patient with a typical postconcussive syndrome who may have a subdural hematoma with a normal neurological examination. Data are not yet available as to whether MRI scans of the brain will be more sensitive than CAT scans in revealing minimal brain damage. A study currently in progress among young boxers has thus far shown no abnormalities (Arnold Goldman, MD, Houston, personal communication). EEGs are very frequently performed after mild head injury. However, most of the time the results are normal. When abnormal, the EEG may show diffuse asynchronous theta and delta waves and a decrease of alpha amplitude and frequency (19). The EEG abnormalities may disappear within hours or days or persist for weeks.

Several neuro-otologic investigations may be helpful. As mentioned earlier, wave I-V intervals have recently been shown to be delayed in brainstem evoked responses. With complaints of persistent dizziness or vertigo, an electronystagmogram can help rule out peripheral vestibular or brainstem dysfunction. Vestibular concussions can certainly cause post-traumatic vertigo and can be demonstrated in this manner. If patients have complaints of tinnitus or hearing loss, audiograms may document impairment.

Many patients have psychological complaints including poor, usually recent, memory, impaired concentration, personality change, anxiety, depression, sleep disturbance, decreased libido, irritability, and fatigue. When presented with a multitude of such complaints or when patients have persistent memory or personality change, neuropsychological testing can be helpful in order to determine how much, if any, impairment can be documented and to what extent depression or neurosis may be contributing (20).

Finally, many patients have visual complaints, including blurry vision and double vision. If such complaints are prominent, ophthalmological examination and visual fields may be helpful. Many of these patients will be found to have convergence insufficiency in which the eyes do not focus in tandem as a result of the head injury. Occasionally, patients with mild head trauma may have extraocular muscle paresis even when a bedside ocular motility examination reveals no abnormality. The most common palsy is due to a sixth nerve lesion causing underaction of the lateral rectus muscle and diplopia on horizontal gaze to the side.

Treatment

Treatment for the postconcussive syndrome includes medications and psychological treatments (Fig 2). Tricyclic antidepressant medications such as amitriptyline may be the best all-around medication for the postconcussive syndrome. The antidepressants can be effective for many of the post-traumatic headache types (21) and may be beneficial for many of the psychological manifestations, including sleep disturbance, depression, and anxiety. Nonsteroidal anti-inflammatory medications may be helpful for many of the headache types. The nonsteroidal anti-inflammatory medications are quite useful in treating muscle contraction headaches. Recently, naproxen, sodium (Anaprox) and naproxen (Naprosyn) have been found to be beneficial in migraine headaches as well. The usual antimigraine medications may be used for post-traumatic vascular headaches. These include beta blocker medications such as propranolol and nadolol; calcium channel inhibitors such as verapamil and nifedipine; Midrin; ergotamine; and as mentioned, certain nonsteroidal anti-inflammatory medications. Narcotic analgesics may sometimes be necessary, but should of course be used on a low-frequency, low-dosage basis. Narcotics should be avoided if at all possible.

Muscle relaxant medication such as methocarbamol, cyclobenzaprine, and carisoprodol may be helpful when the patient has an associated cervical sprain with secondary muscle contraction headaches. Benzodiazepines (diazepam, chlordiazepoxide, lorazepam, alprazolam, etc) may be helpful when anxiety is prominent. However, benzodiazepines should only be used for the short term since over the long run they can be addicting, increase the level of pain, and increase depression.

2. Treatments for post-concussive syndrome.

Muscle contraction type headaches
Simple analgesics
Nonsteroidal anti-inflammatory medications
Antidepressants
Muscle relaxants
Biofeedback
Migraine type
Beta blockers
Tricyclic antidepressants
Calcium channel inhibitors
Nonsteroidal anti-inflammatory medications
Ergotamine
Occipital neuralgia
Nonsteroidal anti-inflammatory medications
Carbamazepine
Greater occipital nerve block
TENS unit
Rarely surgical decompression or nerve sectioning
Psychological support
Education for all involved (patient, family, employer, attorney, insurance company agent)

There are a number of treatments for occipital neuralgia. When there are frequent paroxysms of shooting pain, carbamazepine may be helpful. Conversely in this type or when there is more of a dull, aching component, nonsteroidal anti-inflammatory medications may be useful. Greater occipital nerve block in the mid-superior nuchal line can produce at least temporary and at times longer-lasting relief of head pain. TENS (transcutaneous electrical nerve stimulation) units may at times be helpful for occipital neuralgia as well as post-traumatic muscle contraction headaches. Occipital nerve section or decompression is very rarely indicated.

A variety of psychological measures may be worthwhile and may in fact be the principal treatment. When headaches persist despite trials of a variety of medications, biofeedback may occasionally be helpful. For patients with documented memory deficits, cognitive retraining may be useful. When psychological symptoms are prominent, supportive psychotherapy may be extremely helpful. Occasionally, hypnosis can be beneficial for symptoms not responding to other methods and for post-traumatic phobias.

Although pending litigation may not necessarily prolong symptoms, the physician should encourage settlement if feasible. In some cases, unconscious secondary gain may be responsible for prolonging symptoms. In addition, a considerable amount of stress may be involved in meeting with attorneys, court proceedings, independent medical examinations, and disability examinations. This stress could exacerbate remaining symptomatology.

Finally, the physician can do a great deal of good by providing information to the patient, family members, employers, attorneys, insurance companies, and other physicians. Many patients are greatly reassured to discover that their symptoms are not unique but are instead part of a well described syndrome. Family members may disbelieve persistent complaints, particularly when there is no evidence of outward physical damage.

Strauss and Savitsky make an important point about the patient's interactions with physicians and insurance companies (22): "The harshness, injustice and brutal disregard of complaints shown by the physician and representatives of insurance companies and their ready assumption for intent to swindle do not foster wholesome patterns of reactions in injured persons. The frequent expression of injustifiable skepticism on the part of examiners engenders resentment, discouragement and hopelessness and too often forces these people to resort to more primitive modes of response (hysterical)." Strauss and Savitsky made this statement in 1934. As reviewed, considerable progress has been made since then to demonstrate an organic basis for the postconcussive syndrome, which many would still

flatly deny. The attending physician is in a better position than anyone else to identify the infrequent patient who is a malingerer and, conversely, to support the patient who appears to be sincere, honest, and consistent over a period of time.

Summary

The postconcussive syndrome includes a large number of symptoms that may be the sequelae of minor head trauma. Headaches, dizziness, blurry vision, memory complaints, and anxiety are the most prominent. A variety of lines of evidence, including natural history studies, neuropathological findings, and neurophysiological and psychological testing, have supported an organic basis for the syndrome. Strictly compensation neurosis or malingering is a distinctly uncommon cause (23). However, there is no doubt that premorbid personality can color the response of an individual to any type of illness or injury. Patients with a preexisting neurotic personality style may certainly seem to embellish the symptoms (24). A variety of pharmacological and psychological treatments may be helpful in restoring the patient to full function with time.

REFERENCES

1. de Morsier G: Les encephalopathies traumatiques. Etude Neurologique. Schweiz Arch Neurol Neurochir Psychiat 50:161, 1943.

2. Kurtzke JF: The current neurological burden of illness and injury in the United States. Neurology 32(11):1207–1214, 1982.

3. Wilder CS: National Center for Health Statistics, Rockville, Md, Division of Health Interview Statistics, Department of Health, Education, and Welfare, 1976.

4. Wang CC, Schoenberg BS, Li SC, et al: Brain injury due to head trauma. Epidemiology in urban areas of the People's Republic of China. Arch Neurol 43(6):570–572, 1986.

5. Caveness WF, Meirowsky AM, Rish BL, et al: The nature of post-traumatic epilepsy. J Neurosurg 50(5): 545–553, 1979.

6. Annegers JF, Grabow JD, Groover RV, et al: Seizures after head trauma. A population study. Neurology 30(7 Pt 1):683–689, 1980.

7. Vijayan N: A new post-traumatic headache syndrome: clinical and therapeutic observations. Headache 17(1):19–22, 1977.

8. Miller H: Accident neurosis. Br Med J 5230:919–925, 5231:992–998, 1961.

9. Miller H: Post-traumatic headache, in Vinken PJ, Bruyn GW (eds): Headaches and Cranial Neuralgias, Handbook of Clinical Neurology, vol 5. Amsterdam, North Holland Publishing, 1968, pp 178–184.

10. Symonds C: Concussion and its sequelae. Lancet 1:1–5, 1962.

11. Oppenheimer DR: Microscopic lesions in the brain following head injury. J Neurol Neurosurg Psychiatry 31(4):299–306, 1968.

12. Povlishock JT, Becker DP, Cheng CP, et al: Axonal change in minor head injury. J Neuropathol Exp Neurol 42(3):225–242, 1983.

13. Waddell PA, Gronwall DM: Sensitivity to light and sound following minor head injury. Acta Neurol Scand 69(5):270–276, 1984.

14. Montgomery A, Fenton GW, McClelland RJ: Delayed brainstem conduction time in postconcussive syndrome, letter. Lancet 1(8384):1011, 1984.

15. Guthkelch AN: Post-traumatic amnesia, postconcussional symptoms and accident neurosis. Eur Neurol 19(2): 91–102, 1980.

16. Merskey H, Woodforde JM: Psychiatric sequelae of minor head injury. Brain 95(3):521–528, 1972.

17. Rimel RW, Giordani B, Barth JT, et al: Disability caused by minor head injury. Neurosurgery 9(3):221–228, 1981.

18. Denker PG: The postconcussion syndrome; prognosis and evaluation of organic factors. NY State J Med 44:379–384, 1944.

19. Dow RS, Ulett G, Raaf J: Electroencephalographic studies immediately following head injury. Am J Psychiat 101:174–183, 1944.

20. Binder LN: Persisting symptoms after mild head injury: a review of the postconcussive syndrome. J Clin Experimental Neuropsychology 8(4):323–346, 1986.

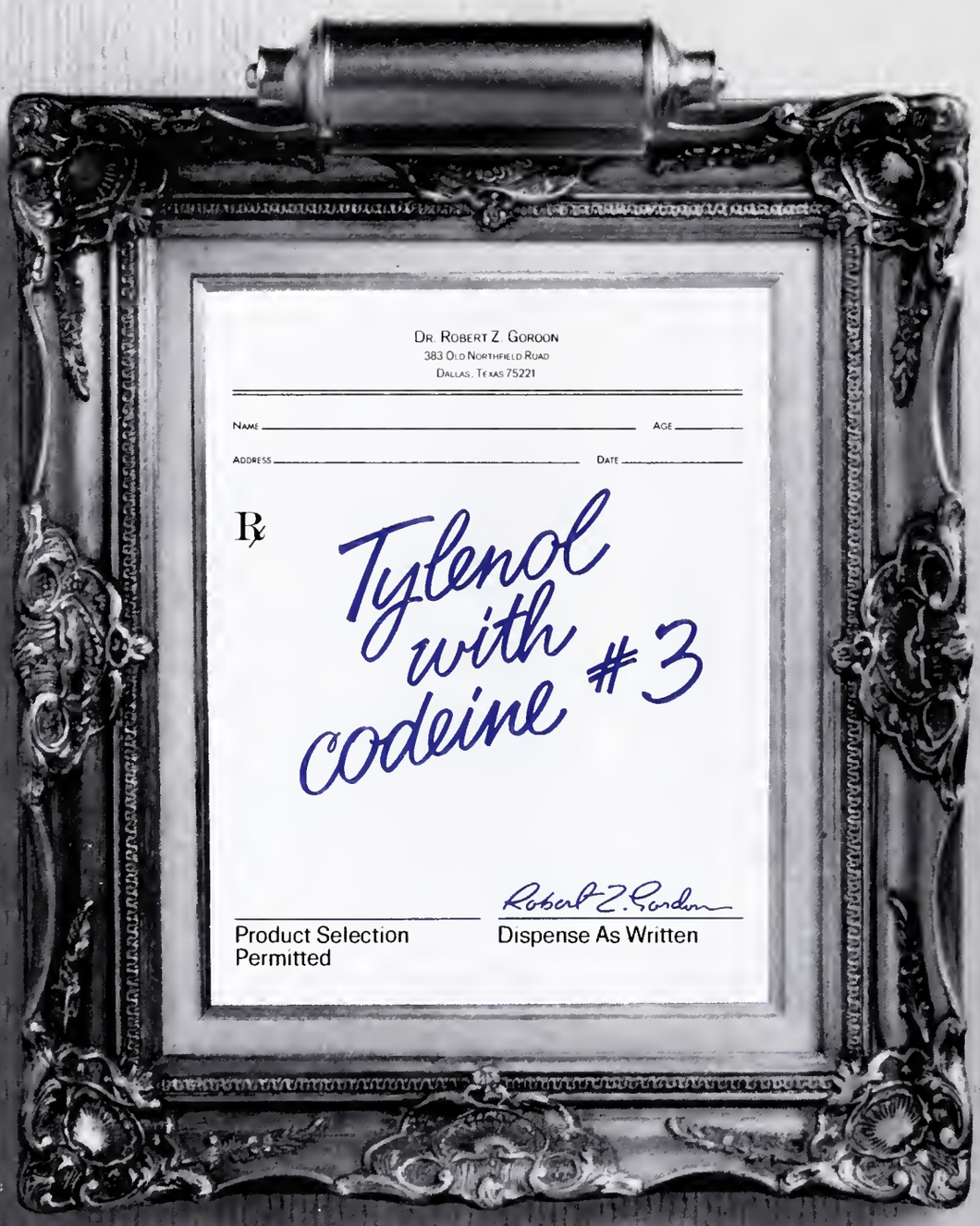
21. Tyler GS, McNeely HE, Dick ML: Treatment of post-traumatic headache with amitriptyline. Headache 20(4):213–216, 1980.

22. Strauss I, Savitsky N: Head injury: neurologic and psychiatric aspects. Arch Neurol Psychiat 31:893–955, 1934.

23. Miller E: The long-term consequences of head injury: a discussion of the evidence with special reference to the preparation of legal reports. Br J Soc Clin Psychol 18(1):87–98, 1979.

24. Keshavan MS, Channabasavanna SM, Reddy GN: Post-traumatic psychiatric disturbances: patterns and predictors of outcome. Br J Psychiatry 138:157–160, 1981.

Note: An accompanying article, "Representing your patients: legal aspects of postconcussive syndrome cases," begins on p 55 of this issue of *Texas Medicine*.



CREATE A SIGNED ORIGINAL

to be sure your patients get...

Tylenol®
ACETAMINOPHEN
with codeine
phosphate

TABLETS C-III ELIXIR C-V

Tablets: Contain Codeine Phosphate*: No. 3—30 mg; No. 4—60 mg—plus Acetaminophen 300 mg.
Elixir: Each 5 mL contains 12 mg Codeine Phosphate* plus 120 mg Acetaminophen (Alcohol 7%).
*Warning: May be habit forming.

© McNEILAB, INC., 1987

TYCT 6445-A

STEVE WALDMAN, JD

Representing your patients: legal aspects of postconcussive syndrome cases

Many legal problems confront victims of postconcussive syndrome. The hurdles that must be overcome in any compensation claim or damage action are significant. Postconcussive syndrome patients must overcome the subjective nature of most of their symptoms and disagreement in the medical community on the validity of this diagnosis. Such claims often become contests of the credibility of the patient. During the treatment of this condition, compensation and other benefits are often withheld, placing further pressure upon the individual. Financial disaster is commonplace, and laws currently in place encourage insurance companies to delay payment of claims.

Fraud is often alleged or at least implied in the defense of claims. However, manufacture or gross exaggeration of injuries is a rare occurrence. Doctors are relied upon to comment on the veracity of their patients, and the physician should explore the facts before passing judgment on the patient's reliability and credibility.

This article offers the views and perspective of a personal injury law practitioner and the pitfalls of handling a tort action for a postconcussive syndrome patient. The role of the physician in legal proceedings is discussed, and suggestions are made for the benefit of patients who suffer from this condition.

Understanding of the legal ramifications of head injuries and, specifically, postconcussive syndrome, requires familiarity with a few basic principles of tort law. Personal injury cases may be divided into two general categories: worker's compensation and common law damages. Some of the principles involved in this question are shared by the two types of claims, but there are several critical differences, which will affect the way a postconcussive syndrome case will be decided by the courts and perceived by persons involved in the legal system.

Worker's compensation

Worker's compensation is a system of medical and disability insurance that provides certain benefits to employees injured on the job and shields employers from direct actions for damages by their workers. Before worker's compensation laws were passed, early in the 20th century, an injured worker was required to prove that the negligence of his employer caused the injury. Any contributory negligence on the part of the employee or one of his coworkers was fatal to recovery. The employer was not obligated to pay medical expenses or financial compensation unless and until the employee was successful in his lawsuit. In the event the worker prevailed, the employer was subject to judgment for all the employee's damages, including monetary compensation for physical pain and mental anguish. The exposure of liability to the employer was therefore potentially substantial, while the employee was required to overcome tall legal hurdles in order to be protected from the consequence of a disabling injury (1).

Steve Waldman, JD, Waldman, Smallwood, and Grossman, 602 Sawyer, Suite 600, Houston, TX 77007.

The Worker's Compensation Act was designed to address these concerns and establish a workable and fair system of medical benefits and financial compensation. While the fairness of such laws and the way they are administered is often debated, a body of law has developed, interpreting the worker's compensation insurance policy. Every word in the act was legislatively enacted, and every significant provision has been interpreted by Texas appellate courts.

A worker is eligible for benefits for injury on the job, regardless of the negligence of his employer, his coworkers, or himself (2). There are very few exceptions to liability for injuries occurring in the course and scope of employment, the most notable being intoxication, act of God, and intentional self-inflicted injury (3). Further, the act was intended to be liberally construed by the courts to compensate workmen for injuries on the job (4).

The act covers all medical expenses that are "reasonably required at the time of the injury and at any time thereafter to cure and relieve from the effects naturally resulting from the injury" (5). The employee who is unable to work for a period of more than one week is also entitled to cash benefits at a weekly rate of two thirds his average weekly wage, subject to the prevailing maximum rate, which at this time is $231 (6). The rate of compensation is set as of the date of injury and is unaffected by subsequent adjustments to the maximum rate. These benefits should continue during the period of the worker's total incapacity, for a maximum period of 401 weeks. In the event of partial incapacity, the employee may recover two thirds of his lost wage-earning capacity, up to the weekly maximum, for no more than 300 weeks. However, the maximum number of weeks for which a worker may recover benefits, partial and/or total, is 401, except in certain types of cases, where weekly benefits continue for the rest of the worker's life (7).

The spouse and children of workers who are killed in the course of their employment are entitled to recover the weekly benefit, on a shared basis. Widows are entitled to compensation until death or two years after remarriage. Children are compensated until they reach age 18, and benefits continue up to seven additional years if the child remains in school. However, in no event may the combined weekly recovery of the heirs exceed the maximum weekly rate, which is presently $231 (8).

Certain other dependent beneficiaries may recover 360 weeks' compensation, should no wife or eligible children survive.

In return for these considerations, employers are shielded from direct lawsuits by their employees (9). Unless a worker is intentionally injured by his employer, or is killed by the *gross* negligence of his employer, he (or his heirs) have no right to sue the employer or any of his supervisors or coworkers (10). If an employer carries worker's compensation insurance with an approved carrier, his employees have no remedy directly against the company for injury on the job, but may only file and pursue a worker's compensation claim. The claim is against the insurance company, and any suit filed to contest that claim will be against the insurance company and not the employer. The State of Texas, political subdivisions, cities, and school districts are allowed to be self-insured; the remainder are protected only by maintaining insurance coverage. A company must carry insurance to obtain the protection from direct action by employees, and the failure to have such coverage results in the loss of all common law defenses to suits by injured employees. The most notable common law defense is the contributory negligence of the worker. However, in a suit by a worker against an uninsured employer, the worker must prove negligence on the part of the employer or a fellow employee to prevail (11).

In the event an employee is injured on the job, due to the negligence of someone other than his employer or coworkers, the employee may maintain a common law damage action against such third party, in addition to asserting a claim for worker's compensation benefits. In that scenario, the worker's compensation carrier would have a right of subrogation, by which it may recover the medical and monetary benefits it paid to the worker out of any recovery against the other person or company (12).

Longshore and harbor workers' compensation

Many of the features of the Longshore and Harbor Workers' Compensation Act mirror the provisions of the Texas act (13). There are some notable differences. The maximum weekly rate is substantially higher, and in many cases, a worker will be paid two thirds of his earnings without reaching this ceiling (14). All medical issues are rigidly regulated by the US Department of Labor, and unless treatment is agreed to by the insurance carrier or authorized by the Department of Labor, only the "primary treating physician" or his referral, are permitted to treat the patient (15). In the case of permanent and total disability, there is no arbitrary cutoff at 401 weeks; benefits continue during the entire period of disability (16). Self-insurance is authorized for private employers, with certain limitations (17).

In some disputed cases, the claimant's attorney's fee may be awarded in addition to his award of compensation, as opposed to being deducted from his share (18). The act shields an employer from direct common law damage liability (19). Further, the right of subrogation against a third party claim applies (20). Most significantly, the right of an independent medical examination exists, in favor of the employer or insurer (21). This act covers only those workers who work on the waterfront, or in certain other maritime occupations, and is not regularly encountered by physicians who do not practice in areas near navigable waters.

There are several other compensation laws covering federal employees. They are not discussed in this article, except to note, as with longshore claims, that medical treatment is very rigidly regulated, and very few attorneys represent individuals in these claims.

Common law damage actions

Common law damage suits are those that allow recovery for common law damages, including actual lost earnings, medical expenses, physical pain, mental anguish, and disfigurement. Such cases may involve traffic collisions, defective products, and medical or legal malpractice. Injuries to workers on railroads and commercial vessels are covered by the Federal Employers' Liability Act (FELA) and the Jones Act, respectively, and not by a worker's compensation scheme (22). These laws provide for a modified common law damage recovery.

Common law damage cases typically involve insurance coverage, but claims on the liability policies that pay for these types of losses are not as rigidly regulated as with worker's compensation. Carriers pay for the defense of claims and for most judgments or settlements of claims or lawsuits. However, there is no administrative procedure for the presentation and payment of claims, or for the payment of medical charges during the pendency of the suit. Rather, damages are typically paid in a lump sum, at the time of settlement or judgment. Medical costs during the litigation are often left to group insurance for payment. If there is no group insurance, the patient's medical treatment may be paid or guaranteed by his attorney. It may also be paid by automobile personal injury protection insurance, which is customarily limited to $2,500 per occurrence. Otherwise, the patient must either find a doctor who will allow the patient to run an account, or the patient will have to seek treatment from a public or charity facility.

The laws regarding negligence have changed considerably in recent years, and a plaintiff is not held to such strict accountability for his own conduct. A person's recovery is reduced by the percentage of the contribution of his negligence to an accident, and in pure, ordinary negligence actions, recovery

is totally denied if that contribution exceeds 50% (23). In product liability, Jones Act, and FELA (railroad worker) cases, a plaintiff may recover even if his negligence was 99% of the cause of the incident, although he will recover only 1% of his damages. The most significant differences between common law damage actions and worker's compensation claims are the right of the common law plaintiff to recover the cash value of all damages he proves to a court or injury, and the lack of an administrative agency and procedures to pay for ongoing medical expenses and weekly support of the injured person in common law actions.

Medical proof

In either type of claim, medical expenses necessitated by the injury are recoverable. To prove such causal relationship, need for treatment, and the correctness of the charges, a plaintiff must establish "reasonable medical probability" by expert testimony from a qualified doctor (24). Failure to introduce such proof is usually fatal to recovery for the particular treatment in question. It is possible for an injured lay person to prove injury and incapacity in a worker's compensation claim without testimony from a doctor, but practically, this is unrealistic and unreliable. Medical testimony is also critical in proving all other damage elements related to physical injury, such as loss of time from work, physical pain, mental anguish, or physical impairment. A doctor's testimony that a condition "possibly" resulted from an event will not constitute proof within reasonable medical probability. It must be *probably* (more likely than not) related, or the injury and resulting medical treatment will likely not be covered.

In common law damage suits, the plaintiff must prove his future medical costs are probable, or his recovery will exclude such costs, even if they are later required. Once a case is decided, it cannot be reopened, except in extreme cases such as fraud or newly discovered evidence that comes to light within 30 days after the trial court enters judgment. The "open medical" provision of the worker's compensation law has no applicability in common law damage suits, as a matter of common practice. Occasionally, the parties to an extremely large damage action will agree to a reversionary medical trust, by which a fund is set up for payment of future medical expenses. In the event such treatment is not required, the money reverts back to the defendant's insurance company.

In cases of aggravation of previous conditions, to recover medical costs, one must show by expert medical testimony that it is reasonably probable that the need for treatment was precipitated by the event, or that the event in question was the producing cause of the need for treatment (25). There may be several producing causes, and the test generally followed for producing cause is a "but for" test, by which such treatment would not be required without the event in question having occurred.

This question may become perplexing in the case of a person who has had significant medical treatment, followed by a period of no medical treatment, followed by an event which aggravates the injured area. As an example, a person who has had a back fusion might fall at home and break the fusion, requiring further surgery. Had the original injury not occurred, he would not have the fused area in his spine, and the fall would not result in a broken bone graft. However, insurance carriers are exceedingly resistant to pay for medical care following an intervening trauma, and such treatment will commonly be disputed by the carrier.

In common law damage suits, and in some worker's compensation claims, a question may arise regarding the percentage contribution of prior injuries or conditions to the present symptoms and disability, which may affect the final recovery by the plaintiff (26).

Settlement of claims

From a practical standpoint, all plaintiffs want to settle their claims as soon as feasible, once reliable determinations of the diagnosis and the impact of the injury on the life of the person are made. In many compensation cases, and in all common law cases, the person asserting the claim receives no compensation until the entire case is concluded. Attorneys for claimants receive up to the statutory maximum of 25% of the amount recovered in settlement or by judgment in a Texas worker's compensation claim (27). Attorney's fees in common law damage actions are not regulated by statute and customarily range from one third to 40% of the recovery. These in longshore claims are awarded on an hourly basis. All such fees are collected at the resolution of the case, in addition to the out-of-pocket expenses incident to handling the case (eg, cost of investigation and depositions), and are paid only if there is a recovery.

While claimants desire resolution of their cases as soon as possible, recovery cannot occur without a settlement or judgment. Litigation often takes several years to resolve, particularly in urban areas, where the courts are crowded. A claimant's attorney has a duty to seek a recovery for all his client's damages, just as an insurance adjuster or defense lawyer has a duty to pay only those damages that are proved. If the parties cannot reach agreement regarding a particular consequence of an injury, the case will not be settled, unless the claimant "gives up" a portion of his recovery, or an insurer pays for damages it does not believe are valid. If no settlement can be reached, the parties must turn to a court or jury to determine the consequences of the

injury and the award of compensation.

Recovery for postconcussive syndrome

Postconcussive syndrome is a potential nightmare for a claimant and his or her attorney because the symptomatology of the injury is so unusual and subjective and because so few people in the medical community and the general public correctly perceive the nature and extent of such a condition. Many of the symptoms, such as pain, depression, and loss of memory, motivation, and libido are difficult to objectively demonstrate and verify. As a result, the claimant is relied upon to assist in much of the testing for the effects of the condition, and to relate the severity of the problems. The claim then hinges on the credibility of the person asserting the condition. Since he or she is a potential financial beneficiary of a severe injury, suspicion of "secondary gain" or malingering for money, is introduced into the legal formula. Further, since memory and other mental functioning are often impaired, the patient is often an unreliable witness. If the patient becomes frustrated or angry as a result of his injuries, he or she is usually a poor witness, and this has a negative impact on the outcome of the case. There is a tendency among persons in the insurance industry to place little faith in the accuracy of this type of complaint. This same prejudice exists in much of the medical community, and in the people who sit on juries. In order to properly handle a legal matter arising out of a postconcussive syndrome injury, the attorney must be prepared to educate insurance adjusters, defense attorneys, and jurors about the ramifications of this condition and to convince them of its authenticity. He or she must also be prepared to deal with physicians who are unfamiliar with the condition and who mistake the symptoms for other processes, disease or otherwise.

Medical-legal problems

Many medical-legal problems exist in cases involving postconcussive injuries. The first, and perhaps most significant, problem is the split in the medical community regarding the validity of the diagnosis. Many doctors are ill-informed, particularly those who do not regularly practice neurology or psychiatry. Symptoms of postconcussive syndrome may be mistaken for unrelated personality disorders or other disease processes that should be responding to conventional modes of treatment. There are also physicians who do not accept the syndrome as a true disease process, and equate its symptoms to a desire to increase the value of a claim for damages. The literature is divided on this subject, although there is increasing support for the view that the diagnosis is valid and the complaints of patients are legitimate. Even for those doctors who accept the condition as a treatable disease process, the element of secondary gain is a consideration.

The subjectivity of the symptomatology arises, in part, from the current state of medical technology. For all the advancements that have been made in the treatment of disease, there are no reliable tests for determining whether pain is genuine or how much pain a person has. As any physician who has had his deposition taken can attest, attorneys for insurance companies are always interested in the objective signs of injury. Pain is uniquely subjective. Therefore, it is only as reliable as the person who feels it and complains of it.

Similarly, memory loss, personality changes, loss of motivation, and loss of libido cannot be tested without the cooperation of the person being tested. Therefore, the problem of the credibility of the patient remains in issue. The MMPI is generally regarded to be the most reliable means of testing personality traits, but that test has come under criticism for the age of its supporting data. Further, the results do not always indicate the source or cause of personality defects when they are discovered.

The independent medical examination

The independent medical examination is an insurance company's (or any defendant's) means of having a physician of its choosing examine the injured party and report on his or her extent of injury and disability (28). It is available in virtually all personal injury claims, although the procedure is most clearly defined, and most often utilized, in worker's compensation claims. The independent medical examination calls upon a nontreating physician to evaluate a claimant on the basis of one examination. Records from treating physicians are often excluded from the examiner's review of the case. The claimant has often been avoiding physical exertion and taking medication, on the orders of his treating physician, which result in the abatement of symptoms relating to the injury. These factors reduce the reliability of the independent examination. However, the significance of the findings of the examiner cannot be overstated, particularly in worker's compensation claims. In such matters, one opinion by any doctor that a claimant is able to return to regular duties gives the insurance company a basis for suspending weekly compensation payments. While the claimant may later prevail in his claim for continuing benefits, this may not occur until his lawsuit is litigated to a jury verdict. The claimant may go with no financial support until such time, which is often a period of several years.

There is little encouragement for the worker's compensation insurance carrier to pay weekly benefits in a contested case while the matter is pending. The compensation statute provides for an interest factor of 4% as the rate of accrual for unpaid compensation benefits. No interest provision exists for

unpaid medical benefits (29). While a claimant can request a hearing before the Industrial Accident Board in the case of a dispute, neither party is bound by the decision of the board, but may appeal such findings by filing a lawsuit. Once suit is filed, the decision of the board becomes a nullity, and is not admissible into evidence at the trial of the case. There are provisions in the Worker's Compensation Act for penalizing carriers who wrongfully withhold benefits, but such provisions do not apply in cases of legitimate dispute as to nature or extent of injury or incapacity, or treatment necessitated by an injury. Quite often, a claimant is given a choice between returning to work against his doctor's wishes, or going without any source of income. In even more tragic circumstances, the carrier will use the opinion of an independent examiner that no further treatment is required as a basis for denying further care by the primary treating doctor.

The Texas Supreme Court recently adopted a doctrine that allows plaintiffs to recover prejudgment interest on certain elements of recovery in common law damage cases (30). While it is too early to evaluate the impact of this decision upon the number of cases settled, the purpose was clearly to encourage insurance companies to settle claims. However, the doctrine has not been applied to worker's compensation claims. When a compensation claim is resolved by judgment, after a trial, the claimant is entitled to 4% interest on all unpaid cash benefits, and no interest on unpaid medical costs (31). The prejudgment interest rate in common law actions fluctuates with the economy and has recently been in the neighborhood of 10% (32). There are currently cases pending in the courts discussing the obligation of insurance carriers in regard to the handling of claims and payment of medical benefits (33). Some change may be realized, but in the case of postconcussive syndrome, as long as a dispute exists as to the validity of the diagnosis and the subjectivity of the symptoms, the problems discussed in this article will remain.

The split in the medical community regarding the validity of the diagnosis of postconcussive syndrome enables insurance adjusters to choose doctors for independent medical examinations who do not accept these subjective types of ailments as legitimate or reliable. While such doctors are open to cross-examination on their views on this point, the immediate effect of their opinion on the claimant's situation is often disastrous. Typically, an independent examiner's opinion that a worker can return to regular duties causes an immediate cessation of weekly benefits, with no further payment of compensation during the remaining pendency of the claim.

The complex case

Perhaps the most perplexing problem that arises in postconcussive cases involves persons who suffer from this condition in addition to other problems. If the claimant has a surgical condition, his medical treatment is quite often left completely to the discretion of the surgeon. As a result, little attention is directed to less dramatic, nonsurgical ailments. When the surgeon has completed his work on the patient, he often fails to obtain opinions from other specialists who may diagnose conditions such as postconcussive syndrome. The surgeon may misread the symptoms as malingering, since "the real problem," namely the surgical condition, has been eradicated.

Fraud and financial disaster

The question of fraud is constantly addressed by persons interested in the legal system, despite the rarity of its occurrence. While there are undoubtedly bad people in every profession, the vast majority of attorneys have no time to waste making claims out of nonexistent injuries. Litigation is expensive for the lawyer, who customarily advances the cost of litigation as well as his time. Attorneys want to know if the doctor believes the patient is not being completely truthful about the injury, at the time the doctor formulates the opinion, and not when the case is being litigated.

Doctors are justified in being on the outlook for malingering, fraud, or any other interference with the proper treatment of actual injuries or diseases. However, the conception that the practice is widespread is mistaken.

With very few exceptions, compensation for an injury is not complete, and people are required to wait extensive periods of time under adverse circumstances before any recovery is obtained. When recovery is obtained, from 25% to 40% of the gross amount will be paid to the lawyer in attorney's fees, in addition to the cost of litigation. Attorney's fees and most expenses are not recoverable from the defendant or insurance company.

Most victims of traumatic injuries would attest that they would gladly give up their financial recoveries in return for regaining their health and avoiding all the legal and financial hardships of litigation. In the worker's compensation setting, the maximum rate of weekly compensation, the maximum duration of benefits, and the method by which partial disability payments are computed all serve to make the process a financial disaster for most injured people.

Cases involving high wage earners provide clear examples of the financial tragedy of worker's compensation claims. Such an individual, during the period of his or her time off from work, will be paid no more than $231, at the present time, even if he

or she earned ten times that amount while working (6). Some employers supplement the worker's compensation benefit by paying the difference between that amount and the employee's regular pay, but this is the exceptional situation. Other beneficent employers find "light duty" for the individual, but this is a rarity. The financial pressure caused by dealing with a drastic reduction in income often leads to emotional upheaval and family discord, which may affect physical recovery.

If the worker is totally and permanently incapacitated, so that he can never return to work, he can realize no more than 401 weekly payments of $231. Insurance carriers seldom pay the maximum benefit without a jury trial. If the worker has sustained a permanent partial incapacity, he is eligible for two thirds of his lost earning capacity, up to a maximum of $231 per week, for no more than 300 weeks. While a period of partial incapacity can follow a period of total incapacity, most claimants cannot claim more than a total of 401 weeks in benefits. Once these payments are made, the worker is no longer eligible for further compensation, except from public assistance, such as Social Security Disability, which is difficult to qualify for.

The plight of a person with an injury to a specific member of the body (eg, arm, hand, leg, foot) is often more compelling. His right to compensation is tied to the percentage loss of use of the particular member, not to his lost earning capacity. For example, the maximum benefit for the complete loss of a leg at or above the knee is 200 weeks' benefits, at the maximum rate of $231. Using the applicable 4% discount applied under the statute, an insurance carrier can write a check for $41,568.98 to the victim of a lost leg, and totally discharge its obligation, other than provision of medical treatment. A pianist or painter who has lost his index finger will receive $9,907.09, and no more, even if such loss means the end of his career (34).

There are cases of fraud in which injuries are manufactured or grossly exaggerated intentionally. However, in the case of a productive worker, there is seldom financial motivation to make these types of claims.

Search for truth

Most controverted cases involve more difficult diagnoses. Head, back, and neck injuries are the most fertile ground for disagreement among physicians and, therefore, between claimants and insurers. In such cases, the extent of pain and other subjective symptoms are the focus of the discussion of ongoing disability. Medical authorities attest to the disabling nature of many such injuries, but many of the same texts discuss secondary gain, fraud, and malingering as a frequent problem in these types of injuries. When such issues are raised in a worker's compensation setting—and they invariably are—the truthfulness and reliability of the patient becomes the central question. The doctor is usually called upon to testify to the veracity, motivation, and cooperation of the patient, and his opinion is *always* critical.

To help ferret out the real injuries from the ones that are being exaggerated or invented, it is helpful to rely upon more than the doctor's skills and available testing. Knowing the attorney involved can often assist the doctor in determining the validity of a claim. Good lawyers do not want to represent phony claimants, and they usually appreciate your opinions on this point. People who are attempting to fool their doctors are often trying to fool their lawyers as well. However, when a lawyer who is respectable feels the claim is genuine, his opinion usually has a basis in reality. Lawyers who have a reputation for making claims in cases of little or no injury deserve to have their clients more closely scrutinized.

Friends and family members of the patient are also good indicators of the reliability of a pattern of complaints, such as those that are found in postconcussive syndrome cases. While many doctors do not have time to make an investigation into this aspect of a patient's life, this information is often available to the attorney. Further, many injured persons have friends or family members accompany them to the doctor's office or visit them in the hospital. A few minutes of conversation can often illuminate a problematic situation. This is not to say that doctors should routinely interview friends and relatives about their patients. However, in some cases, such investigation is called for, in order to make a proper diagnosis.

Unfortunately, the persons who are in the occupations that have the highest risk of physical injury are typically the least capable of coping with the effects of such injuries. They are the manual laborers, who are less educated and sophisticated than white collar workers. They also rely more heavily upon their physical abilities than mental prowess. Such individuals are more likely to become victims of a failure to properly diagnose postconcussive syndrome. They are also more likely to panic from a failure of their minds or bodies to function normally, which can only intensify the effects of the condition. Their condition must be diagnosed and treated for the patient to recover. It is imperative that doctors who treat injured persons be sensitive to their patients' complaints that refer to this syndrome. When a patient has symptoms suggestive of postconcussive ailments, he or she should be evaluated by physicians competent to address this type of condition. If the appropriate specialist, such as a neurologist or psychiatrist familiar with the disorder, diagnoses no real disease process, only one consultation will have

been spent. If such a referral leads to a correct diagnosis of postconcussive syndrome, and the patient is properly treated for such, the total medical and legal picture for the patient will be more workable.

REFERENCES

1. Korioth, Southers, Texas Worker's Compensation Desk Book, Austin, TX, Worker's Compensation Publishing Co, Inc, 1980.
2. Art 8306, Sec 1, Tex Rev Civ Stat.
3. Art 8309, Sec 1, Tex Rev Civ Stat.
4. American General Insurance Co v Williams, 149 Tex 1, 227 SW2d, 788(Tex 1950).
5. Art 8306, Sec 7, Tex Rev Civ Stat.
6. Subject to change every Sept 1. Art 8306, Sec 6,29, Tex Rev Civ Stat.
7. Art 8306, Secs 10, 11, and 11a, Tex Rev Civ Stat. Sec 11a calls for lifetime weekly payments to a worker who has lost, or lost the total use of: both eyes, both feet, both hands, or one hand and one foot, or who has sustained paralysis of both arms, both legs, or one arm and one leg as a result of spinal injury, or who has sustained a skull injury resulting in incurable insanity or imbecility.
8. Art 8306, Secs 8, 8a, Tex Rev Civ Stat.
9. Art 8306, Sec 3, Tex Rev Civ Stat.
10. Art 8306, Sec 5, Tex Rev Civ Stat. If a worker is intentionally injured by his employer, he may elect to sue his employer for actual and punitive damages, or pursue a worker's compensation claim. If a worker is killed due to the employer's gross negligence, his heirs may pursue a punitive damage claim against the employer in addition to seeking worker's compensation death benefits. However, they are stopped from suing the employer for actual damages.
11. Art 8306, Secs 1, 4, Tex Rev Civ Stat.
12. Art 8306, Sec 3, Tex Rev Civ Stat.
13. 33 USC 901, et seq.
14. As of Oct 1, 1986, the maximum weekly rate was $605.32. The maximum rate is subject to increase every Oct 1, depending upon the rise of the National Average Weekly Wage. 33 USC 906.
15. 33 USC 907.
16. 33 USC 908.
17. 33 USC 932.
18. 33 USC 928.
19. 33 USC 935.
20. 33 USC 907.
21. 33 USC 935.
22. Section 33.001, Tex Civ Prac Remedies Code; Duncan v Cessna Aircraft Co, 665 SW2d 414 (Tex 1984).
23. 45 USCA 51; 46 USCA 688.
24. Parker v Employers Mutual Liability Insurance Co of Wisconsin, 440 SW2d 43 (Tex 1969).
25. Gulf Insurance Co v Gibbs, 534 SW2d 720 (Tex Civ App—Houston, 1st Dist, 1976, writ ref'd nre).
26. Art 8306, Sec 12, Tex Rev Civ Stat; Transport Insurance Co v Mabra, 487 SW2d 704 (Tex 1972).
27. Art 8306, Sec 7c and 7d, Tex Rev Civ Stat.
28. Art 8307, Sec 4, Tex Rev Civ Stat; Rule 167a, Tex Rules of Civil Procedure; Rule 35, Fed Rules of Civil Procedure.
29. Art 8306a, Tex Rev Civ Stat.
30. Cavnar v Quality Control Parking, Inc, 696 SW2d 549 (Tex 1985).
31. Art 8306a, Tex Rev Civ Stat.
32. Cavnar v Quality Control Parking, Inc, supra.
33. Aetna Casualty and Surety Co v Marshall, 699 SW2d 896 (Tex App—Houston, 1st Dist, 1985, writ granted). Ranger County Mutual Insurance Co v Guin, 704 SW2d 813 (Tex App 6 Dist 1985, writ granted).
34. Art 8306, Sec 12, Tex Rev Civ Stat.

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS
MEDICAL
LIABILITY
TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

JACK HAYES, PhD
MELANIE ANN WHITE, MS

Physician deaths: an analysis of the JAMA obituaries

An analysis was made of the mortality of 12,378 of the approximately 32,000 physicians reported in the obituary column of the Journal of the American Medical Association (JAMA) *during the years 1969 through 1979. It was determined that the disease-specific mortality patterns of these physicians were similar to the mortality patterns of white males although the total mortality rate was lower. Our findings do not support some of the published claims about physician suicide rates.*

During the past century, mortality patterns have been established for the United States and for many population subgroups. Literature dealing with physician mortality tends to be controversial, with physician suicide rates the most controversial and most discussed feature (1–4). Other causes of death among physicians have not been as well studied (5,6).

Methods

Data were extracted from a randomized sample of 12,378 of the approximately 32,000 physician deaths published in the obituary columns of *JAMA* from 1969 through 1979. Because of their accessibility, these AMA obituary records have been the source database for many surveys of physician deaths (2). The AMA estimates that these records represent an estimated 90% of American physicians (1). Analysis of the 1978 obituaries showed that the majority of the reports published were based upon information from the death certificate.

We selected our mortality categories to conform to those used in the *Monthly Morbidity and Mortality Report (MMMR)* and compared our data with these published statistics. Since the data on suicide deaths was to be compared with rates derived by other studies, deaths from drug overdose were included in the "suicide" category. This method was used by researchers who suggest that this gives a truer picture of the actual number of suicides (2).

The principal cause of death, in cases where more than one cause of death was cited, was determined to be the primary cause listed on the death certificate. No attempt was made to do a multicausal analysis. The proportionate death ratio was determined by dividing the number of deaths from a specific cause by the total number of deaths.

Results

The population in this study contained 11,271 men and 1,107 women. Although racial backgrounds are not given in the obituaries, the population is reported to be essentially Caucasian (1,6).

The overall pattern of deaths for physicians in this study was similar in many cases to the mortality pattern for white men. Diseases of the heart were the leading cause of death, accounting for 40.55% of all deaths in our study (Fig 1). Myocardial infarction was the most common cause of death among the heart diseases, causing 17.7% of all deaths. Cancer ranked second, with cerebrovascular conditions ranking third. The most unusual finding in this study was the unexpectedly high percentage of pneumonia deaths, significantly higher than our comparison database of white men.

The data in these obituary files do not support claims by some researchers (4,7–9) of a high incidence of alcohol and drug abuse among physicians. Our findings indicate that only 1.8% of the deaths in this study were suicides; a suicide rate of 8.5 per 100,000. While our figures do not agree with any of those derived by some studies (2–4,10), another researcher (1) with better access to the *JAMA* files indicated that suicide deaths may often be masked by the attending physician or coroner.

The obituaries were also separated into the age groups to determine what differences existed in mortality patterns by age cohorts (Fig 2). We found that the age grouping spread of the reported deaths was very similar to the spread for white men reported in the *MMMR*. Deaths peaked in the 64 to 73 age group, with modes at 73 years and 76 years.

The picture obtained by investigating the proportional mortality for each specialty proved inconclusive since eight of the 19 boards had fewer than 175 individuals.

Of the 11 boards represented by more than 175 individuals, the average age at death ranged from a low of 57.6 years to a high of 74.7 years. Heart disease was the leading cause of death in all groups, ranging from a low of 31.6% for board-certified pathologists to a high of 46.86% in radiologists. Our data also confirmed previously published reports that there was a higher frequency of suicide among physicians who were certified in psychiatry and neurology than among physicians in other groups (11).

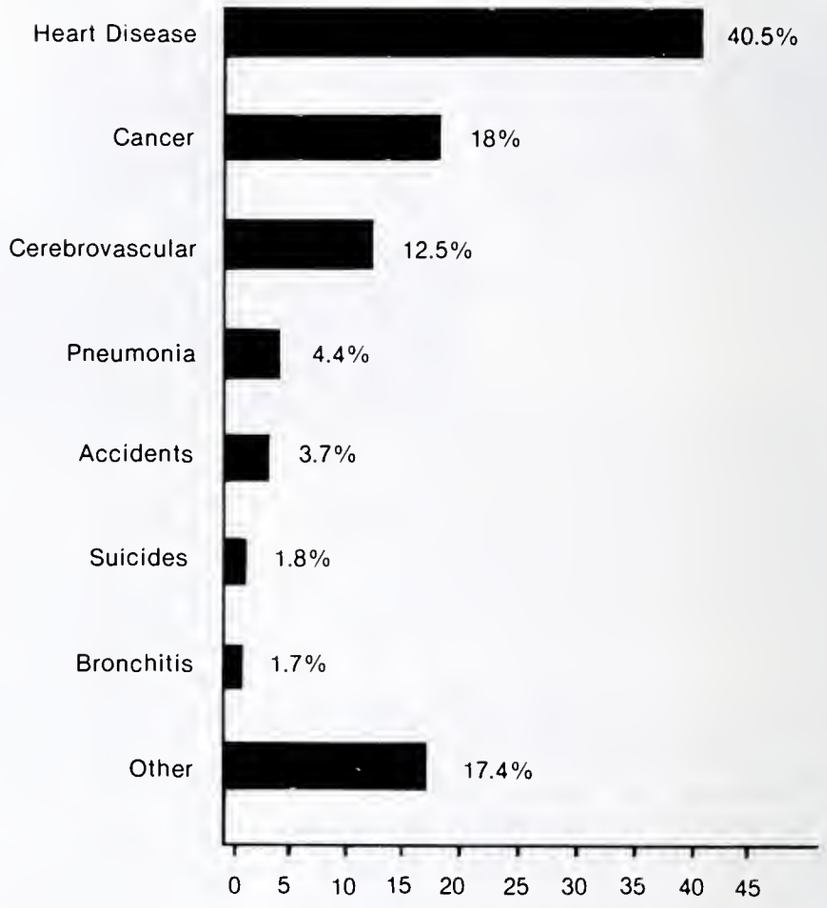
The *JAMA* data indicate that the number of physician suicides is slightly lower than the number of suicides in the white male population, though it is not as high as some of the literature indicates (1–4,9). Whether this indicates a tendency to mask these deaths due to editorial policy or other cause is unclear. Because the data are vague, no conclusion can be reached about the ultimate trend in physician suicide rates. We suspect that some suicide deaths were disguised by ill-defined terms or labeled as accidents.

Conclusion

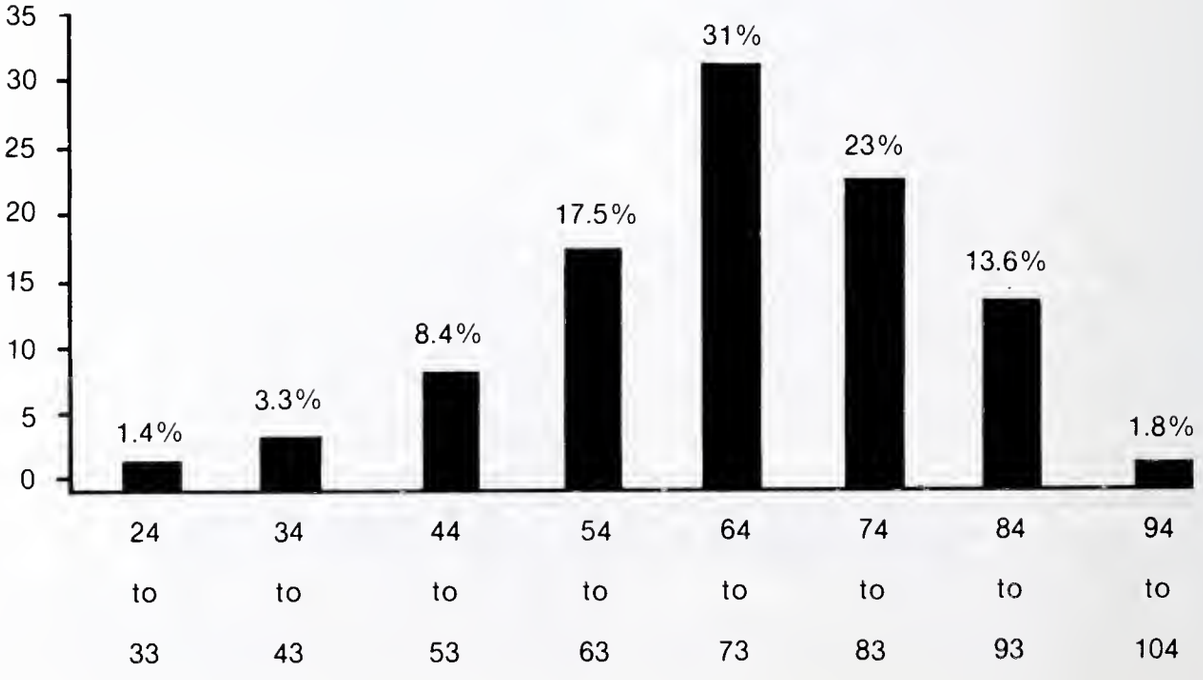
The mortality pattern for physicians in this study is relatively similar to that for white males (Fig 3). Slight differences exist in the percentage of deaths

Jack Hayes, PhD, Department of Preventive Medicine and Community Health, Texas Tech University Health Sciences Center, School of Medicine, Lubbock, TX 79430; Melanie Ann White, MS, Garland, Tex. Send reprints requests to Dr Hayes.

1. Percentage of physician deaths by cause of all deaths reported for years 1969–1979.



2. Age distribution, all physician deaths.



from diabetes, suicide, pneumonia, and motor vehicle accidents. Despite minor differences in the groups, overall patterns were similar. Our study population had a suicide rate of 8.5 per 100,000 population members, lower than that reported for white males (18.8 per 100,000). These figures do not substantiate reports that the number of physician suicides is two to three times the rate of suicides in white males.

Pattern projections for each board show differences in mortality-cause percentages for each specialty. Our data tend to confirm published reports that physicians who are board certified in psychiatry and neurology have a higher percentage of suicide, though the differences determined by this study do not appear to be significant. The relative differences in the patterns may be an indication of the overall level of stress within each specialty. We feel that these data might serve as a baseline for this time period against which future changes may be compared.

3. Deaths by cause: physicians and Caucasian males. (Rate of death by cause is expressed as the rate per 1,000 live population.)

Cause	Physicians, *JAMA* Obituary Sample		Mean Value, Caucasian Males, 1970–1978*	
	Percent	Rate	Mean Percent	Mean Rate
Heart disease	29.1	398.8	38.7	430.9
Cancer	19.6	201.4	21.1	189.6
Cerebrovascular	9.6	100.3	11.8	91.2
Pneumonia	4.6	46.9	3.2	32.6
Suicide	0.8	8.5	0.9	18.8
Cirrhosis	0.6	6.8	1.1	20.5
Bronchitis	1.6	18.1	0.8	23.9
Diabetes	0.1	1.8	2.1	14.9

*MMWR.

REFERENCES

1. Craig AG, Pitts FN: Suicide by physicians. Dis Nerv Syst 29:763–772, 1968.
2. Bergman J: The suicide rate among psychiatrists revisited. Suicide Life Threat Behav 9:219–226, 1979.
3. Freeman W: Psychiatrists who kill themselves: a study in suicide. Am J Psychiatry 124(6):846–847, 1967.
4. McCue J: The effects of stress on physicians and their medical practice. N Engl J Med 306(8):458–463, 1982.
5. Wright-St. Clair RE: Causes of death in colonial doctors. N Z Med J 88(616):49–51, 1978.
6. Matanoski GM, Seltser R, Sartwell PE, et al: The current mortality rates of radiologists and other physician specialists: deaths from all causes and from cancer. Am J Epidemiol 101(3):188–198, 1975.
7. Modlin HC, Montes A: Narcotics addiction in physicians. Am J Psychiatry 121:358–365, 1964.
8. Barney WH: Physicians caring for physicians. Va Med 109(10):676–679, 1982.
9. Coming to terms with your failed expectations. A non-credit course for physicians-in-training. OSR Report 6(1), 1982.
10. Blachly PH, Osterud HT, Josslin R: Suicide in professional groups. N Engl J Med 268:1278–1282, 1963.
11. Rich CL, Pitts FN Jr: Suicide by psychiatrists: a study of medical specialties among 18,730 consecutive physician deaths during a five-year period, 1967–72. J Clin Psychiatry 41(8):261–263, 1980.

Texas Cancer Plan: current profile and future directions

Joseph T. Painter, MD, Vice President of Extramural Programs, and Owen McCrory, Director of Extramural Programs, Texas Cancer Data Center, HMB 223, The University of Texas System Cancer Center, 1515 Holcombe Blvd, Houston, TX 77030.

The fight against cancer in Texas has a long and distinguished history. The Texas Cancer Plan, the product of the Legislative Task Force on Cancer in Texas (LTFCT), represents the current chapter in this fight. It is based on the success of previous efforts in both Texas and the nation and no doubt will evolve into new directions and future chapters. This article reports on the Texas Cancer Plan as recently developed by the LTFCT. Highlighted are a brief chronicle of the LTFCT process, substantive aspects of the plan and key strategies, a summary of the plan implementation to date, and reference to the oncology guidelines in the special supplement to this edition of Texas Medicine. *Finally, we present a discussion of possible future directions for cancer control in Texas.*

In February 1984 the Speaker of the Texas House of Representatives, Gibson D. "Gib" Lewis, appointed the Legislative Task Force on Cancer in Texas. He directed this group of 52 citizen-volunteers to prepare short- and long-term plans to reduce the burden of cancer in Texas. The task force was composed of a wide range of public representatives and private citizens, health care providers, voluntary health organizations, and public agencies and represented all geographic regions of the state (1).

The obvious physical, psychological, and economic costs, the large number of new cancer cases expected, the fiscal commitment of the state, the conservative estimate that one fourth of all cancer deaths could be prevented, and the absence of a state plan for the future all prompted the Speaker of the House to create the task force (2).

Specifically, more than 44,500 new cancer cases were predicted in Texas for the year 1984, and the number was expected to increase to 84,000 by the year 2000 (3). These projections were based on an increasing and aging population, continuation of certain high-risk behaviors, and improved cure rates leading to an increasing rate of new second primary cancers. Based on new information available in 1987, the current projections are for 75,000 new cancer cases by the year 2000, a reflection of changing population trends (3). In 1980, the costs of primary and terminal cancer care in Texas were estimated to exceed $400 million per year. At the same time, the annual loss to the state's economy in lost earnings due to cancer was more than $1.5 billion (4).

Knowledge and techniques for preventing some of these cases were already available (5). Successful treatment of cases detected in early stages of disease had already been technically proven. Some of this cost in human and economic terms was unnecessary. A plan was needed to begin targeting efforts to realize more systematically the benefits of this knowledge and technology.

The short-term plan

The LTFCT was initially organized with a central executive committee and six regional subcommittees. It developed a short-term plan to deal with immediate needs and priorities as identified by extensive meetings, synthesis of available information, and public hearings on both state and regional levels. During this first phase of activity, the task force found that information was lacking on the incidence of cancer in Texas and available cancer-related resources. Coordination was lacking among existing cancer activities. These and other findings were summarized in the task force's initial report in October 1984 (2).

The major initiatives of the short-term plan called for creation of the Texas Cancer Council (TCC) to act as a focal point for implementation and coordination of the Texas Cancer Plan, expansion of the Texas Department of Health Cancer Registry Program to collect and analyze cancer incidence data on a statewide basis, and establishment of a comprehensive school health program statewide to be implemented through existing administration.

Responding to the recommendation, the 69th Texas Legislature created the TCC through enactment of SB 53, effective Sept 1, 1985 (6). Subsequent legislation appropriated $7 million to the council for the biennium to implement the Texas Cancer Plan (7). These actions resulted in two parallel but complementary activities—implementation of the short-term plan by the Texas Cancer Council to begin building a statewide program and continued development of the long-term plan by the LTFCT.

The long-range plan

In November 1984, the task force reorganized along functional lines. Over the next 18 months, task force members reviewed requirements in physician and nurse education, public education, community cancer care, clinical investigation, and optimal cancer care. An additional 300 expert volunteers from throughout the state organized into work groups, developed baseline data on resources available for cancer care, drew up plans for networking resources to coordinate activities and multiply their effectiveness, and wrote guidelines for optimal cancer care.

The final report of the LTFCT was presented to Speaker Lewis on Sept 10, 1986 (1). That report contains the current Texas Cancer Plan, a plan built on a framework of four goals and a comprehensive, long-range program to improve cancer prevention, detection and diagnosis, access to cancer treatment,

Cancer Update is presented as a service of the TMA Committee on Cancer, in cooperation with *Texas Medicine's* Editorial Committee. Guest editor for the series is Irwin M. Krakoff, MD, professor of medicine and pharmacology, M. D. Anderson Hospital and Tumor Institute, Houston.

and community cancer control throughout the state over the next 14 years.

The Texas Cancer Plan—a prescription for the future

In order to cover the broad range of possible interventions, maintain a consensus of thought, and focus attention on achievable targets, four goals were specified:

1. Lower the risk for developing cancer.
2. Detect, diagnose, and treat cancer earlier, when cure is more likely.
3. Improve the accessibility, availability, and quality of cancer resources, services, and programs in Texas.
4. Advance control of cancer through development and application of new prevention, detection, diagnostic, and therapeutic methods and techniques.

These goals will be referenced, in abbreviated terms, as prevention, detection, treatment, and research. Within the context of these goals, specific objectives and targeted activities for implementation were also identified. Over 70 recommendations and 160 specific actions were detailed by the task force (8). A few of the major recommendations are summarized here.

PREVENTION

Certain recommendations provide the basis for a statewide cancer prevention program. They include establishing a statewide comprehensive school health education program, training teachers in new health education techniques, targeting public education initiatives towards high-risk groups and special audiences, developing special regional cancer prevention programs in high-risk or underserved areas, like the Rio Grande Valley, and encouraging the formation of regional coalitions for cancer prevention and education.

Given the special problem of cigarette addiction and the larger issues of tobacco and cancer, the plan recommends a central clearinghouse and outreach program on the hazards of tobacco. Legislative actions recommended by the task force include limiting smoking in public meetings and public places and doubling the excise tax on cigarettes.

DETECTION AND DIAGNOSIS

Other recommendations established the framework for cancer detection and diagnosis at an earlier stage of disease. The task force recommends expansion of cancer screening and detection programs in public health clinics. It further recommends organization of a statewide physician and nurse education network to be coordinated with the resources of the medical schools and cancer centers. Medical schools and family practice training centers are encouraged to develop skills-training laboratories in which physicians can learn how to perform new detection and diagnostic procedures. Finally, the plan advocates expansion of nurse training programs in cancer prevention and screening to provide those services in schools, work sites, public health clinics, and doctors' offices.

TREATMENT

Access to high-quality cancer treatment is fostered by the recommendation that an inventory of cancer resources, services, and programs be published and made widely available to the public and to professionals. Additionally, the plan recommends networking community hospitals and those with cancer care programs accredited by the American College of Surgeons (ACOS); it also recommends that an ACOS-qualified or -approved program be developed in each of the 24 state planning regions to improve access to and availability of these high-quality cancer programs. Guidelines for optimal cancer care, developed by the LTFCT, allow each facility to judge its needs for services and enable physicians to be aware of generally accepted regimens for cancer management. This is discussed in more detail below.

RESEARCH

Transfer of new cancer treatment techniques from research centers to the community can be facilitated by establishing a cancer research and communication network between community cancer treatment centers and cancer research centers, providing collaborative programs to test treatment advances in community settings. The first phases of this initiative should expand communication and cooperation among researchers in Texas.

Key strategies

Recommendations that cut across these four goals include information on the incidence of cancer in Texas through a registry program; an integrated statewide database on cancer resources, services, and programs available on a local and regional basis; and creation of advisory committees to the TCC to help monitor and evaluate the success of the plan over time. Certain features of the plan deserve special emphasis. It is *comprehensive*, made up of detailed steps needed to reach the plan's goals; it is *strategic*, focusing on the next 14 years; and its goals are *realistic and achievable*. A variety of means are used to help facilitate success. One of the principal means is *networking* of existing resources by linking the wealth of volunteer, private, and government activities in Texas to share information and services, eliminate unnecessary duplication, and achieve greater effectiveness. A second important mechanism is *coordination* of efforts between the public and private sectors. Private initiatives will harness the knowledge, experience, and resources

of the private sector as an integral part of the plan. Many recommendations call for joint public-private actions, such as the comprehensive school health education program in which the TCC and the Texas Education Agency provide coordination and administration of the program while the American Cancer Society provides volunteers and curriculum materials. Finally, state funding is used conservatively to launch short-term projects and demonstration programs and to serve as a catalyst for long-term programs using public funds in the beginning and other methods of funding in later stages.

Plan implementation priorities to date

The TCC is responsible for implementing the plan. As with most plans, the resources needed to implement programs far exceed available funding. To facilitate the establishing of priorities, the TCC has adopted the following principles:

1. Implementation of the Texas Cancer Plan is based on a public-private partnership: The Texas Cancer Council is the public agency established to maintain and implement the Texas Cancer Plan. Broad participation is required from other public agencies and individuals in the private sector to implement the plan successfully. The American Cancer Society-Texas Division is the voluntary health agency for cancer in Texas and should serve as the coordinating point for private support.

2. Given funding limitations, the following criteria will be used to establish program priorities:

A. A balance should be struck between programs with a short-term impact and those with long-term preventive goals.

B. The TCC should encourage cooperation among organizations and will build on existing resources.

C. Programs should incorporate innovative ideas and techniques where appropriate and provide incentives to individuals and organizations to lower the burden of cancer.

D. Programs should give special consideration to populations-at-risk or target areas to demonstrate program effectiveness.

E. The TCC should encourage cost-sharing by sponsoring organizations and by private funding of programs.

F. Funded programs should be given likely end points for the commitment of financial support.

Given these constraints, the TCC has allocated 75% of its budget for cancer prevention and early detection initiatives. This demonstrates a clear orientation to the future. The benefits of many of these programs will not be realized for years to come, but the investment must be made now in order to realize those benefits.

Within the context of the four plan goals, the programs funded by the TCC can be divided into two groups. The first group of programs includes activities directly targeted at the population at risk, whether in the general community (eg, school-aged children) or in a special risk group (eg, smokers). The programs in the second group are supportive programs, targeted to provide strategic information, resource development, or coordination through networking.

A summary of the programs funded by the TCC, by plan goal and type of activity, follows.

PREVENTION

Four initiatives funded under the prevention goal are directly targeted to various populations at risk, while 14 initiatives are support activities. The direct programs include a comprehensive school health program, the Office of Smoking and Health, a cancer prevention program in the lower Rio Grande Valley, and a special nutrition project in East Texas. Among the indirect programs are two teacher-training centers to provide technical assistance to the school health outreach program, development of techniques for effective mass media cancer interventions, a physician oncology education program, and a nurse oncology education program. These latter two support programs also impact the detection and treatment goals.

DETECTION

There are five direct initiatives and 11 support programs funded under the detection goal. The direct initiatives include expanded screening and detection programs in the state and county public health clinics in the lower Rio Grande Valley, a related diagnostic reimbursement follow-up program, and a medical transportation option for patients with cancer. In addition, the TCC helped to support the special breast cancer risk assessment program recently conducted throughout the state by the American Cancer Society-Texas Division. Supportive programs include skills development laboratories at several medical schools and family practice programs around the state, expanded public health nurse training, and the dissemination of the oncology guidelines.

The profile of treatment and research programs is quite different from that of prevention and detection programs.

TREATMENT

No direct treatment programs have been funded by the TCC, but eight supportive programs have been initiated. Direct programs have not been funded because extensive resources would be required to have any impact and because existing resources and programs are already available to some degree. The TCC refers direct cancer treatment issues to existing programs, providers of care, and payment

sources. Supportive programs funded include the physician and nurse oncology education programs referenced above, a conference on the American College of Surgeons–Cancer Program, development of a model program for children with cancer, and the oncology guidelines.

RESEARCH

In the research area, no direct programs have been funded, and only three supportive programs have been initiated. Direct programs have not been funded because extensive resources would be required to have any impact and because detailed administrative procedures must be developed in order to be scientifically on target and disperse funds on a fair and objective basis. The TCC currently refers direct cancer research issues to existing researchers in the state and to current funding sources. A search for adequate funding through the TCC is in process in order to fund priority projects in the future. A related supportive program, the Texas Cancer Research Communication Network, has been funded. This program will begin the process of developing a cooperative research program.

In addition to the above referenced initiatives, several supportive programs funded by the TCC affect all four goals. These include collection of data on the incidence of cancer, a data center for the collection and dissemination of information on cancer resources, services and programs in Texas, the development of outreach programs to explain and coordinate the Texas Cancer Plan, and the development of a prototype regional cancer network in one area of the state.

As summarized above, the TCC is progressing in the implementation of the Texas Cancer Plan. Within the available funding levels, activities have been initiated for all goals.

Oncology guidelines—a reference and a reminder

The optimal cancer care guidelines developed by the task force are contained in the special supplement to this issue of *Texas Medicine*. Similar guidelines have been developed regionally and statewide in other parts of the country, through the Community Hospital Oncology Program sponsored by the National Cancer Institute and through collaborative academic efforts that resulted in such works as *Clinical Oncology*, edited by Philip Rubin, MD (8) and *Cancer Manual*, edited by Blake Cady, MD (9). Both works were published by the American Cancer Society. A similar effort in Texas was envisioned as serving a number of related and additional purposes: to improve the quality of care for all Texans with cancer; to encourage networking of physicians, facilities, and cancer resources; to serve as measures of the adequacy of cancer resources and services; to serve as a curriculum for the training and education of physicians; and to serve as a planning tool for facilities developing cancer programs.

The task force appointed eight oncology work groups made up of 87 cancer specialists from all regions of the state. Each work group was multidisciplinary and included medical oncologists, surgeons, and radiotherapists who represented academic medicine, cancer care centers, and private practice.

Over a year's time, the work groups developed guidelines for diagnosis and treatment of cancers in specific sites, encompassing carcinomas of the breast, colorectum, head and neck area, lung, male urogenital area, female cervix, endometrium, and ovary. The work groups also developed guidelines for hematology-oncology and for pediatric oncology. The 38 cancer sites selected are estimated to cover 76% of all new cancer cases and all of the major cancer sites.

The resulting documents present physicians' perspectives of a rapidly changing field and offer pragmatic guidelines meant for busy physicians who need to make decisions regarding primary care, consultation, or referral of suspected or confirmed cancer cases. Each report describes the epidemiology and etiology, detection and diagnosis, classification, principles of treatment, and results and prognosis for each cancer discussed.

The guidelines are not standards of care, but instead incorporate the most current experience on optimal care for the cancers most frequently encountered. In addition, the guidelines are part of a longitudinal physician education effort in cancer prevention, detection, and treatment from medical school through continuing education. We recommend them to you for your review and ready reference.

Cancer control in Texas—future directions

The LTFCT was charged with producing a plan to reduce the burden of cancer in Texas. Those efforts resulted in the Texas Cancer Plan, a comprehensive statewide plan. The creation and long-term continuation of the Texas Cancer Council is an integral component of that plan. As the focal point for plan implementation, as well as monitoring and revision over time, the TCC is likely to play a significant role in future cancer control activities in Texas. The level of significance will be determined by a set of factors that unfold in the future, some of which are incorporated in the plan itself and others related to the larger environment. These factors include participation and cooperation among organizations and existing resources in pursuit of the overall goals; available resources for program implementation; realization of the benefits from the programs implemented; political and organizational support at the

regional and local level for the plan and specific programs; and continued progress in development of the knowledge base and techniques to effectively control cancer.

The impact of these factors on the future role and scope of the TCC, and on cancer control in Texas, cannot be ignored.

In summary, a movement has begun to try and control cancer in Texas. A plan is in place to make every school a cancer prevention center, every doctor's office and public health clinic a cancer prevention and detection center, and every Texan knowledgeable about cancer. The plan will make cancer care accessible in or near the community of every Texan and will make the latest techniques in cancer management available across the state.

The anticipated outcomes of this plan meet the goal of reducing the burden of cancer in Texas: reducing the number of new cancer cases and deaths from this disease; decreasing the pain, suffering and disability of those afflicted; and decreasing the personal cost and economic impact of cancer. We recommend the Texas Cancer Plan for the citizens of the state and hope you will participate, cooperate, and support its implementation.

REFERENCES

1. Legislative Task Force on Cancer in Texas, Texas Cancer Plan: Actions and Directions for the Future, 1986–2000 (Sept 10, 1986).

2. Legislative Task Force on Cancer in Texas, Texas Cancer Plan: Immediate Needs and Priorities, 1985–1986 (Oct 4, 1984).

3. Interagency Center for Cancer Prevention and Control, Texas Department of Health and The University of Texas System Cancer Center-M. D. Anderson Hospital and Tumor Institute: Impact of Cancer on Texas, ed 3, 1984; ed 4, 1987.

4. Eddy DM: The Economic Impact of Cancer Prevention in Texas. Report sponsored by the National Cancer Institute, grant #CA-14613–04, 1980.

5. American Cancer Society, 1986 Cancer Facts and Figures. New York, American Cancer Society, Inc, 1987.

6. Texas Cancer Council. Tex Rev Civ Stat Ann art 4477–41 (Vernon 1987).

7. Indigent Health Care and Treatment Act. Tex Rev Civ Stat Ann art 4438F (Vernon 1987).

8. Rubin P: Clinical Oncology. Available through local American Cancer Society Unit or Division, ed 6, 1983.

9. Cady B: Cancer Manual, ed 7, 1986. Available through American Cancer Society Unit or Division.

ACKNOWLEDGMENT

Dr Painter served as staff director to the Legislative Task Force on Cancer in Texas during its inception, and Mr McCrory served as assistant staff director. They gratefully acknowledge the contributions by task force chairman James D. Dannenbaum and staff.

Mean,

Powerful against susceptible pathogens.*

lean &

Easy on tight budgets.

clean.

Gentle to patients (generally well tolerated).

The one antimicrobial that belongs on every formulary.

Once-a-day Rocephin® ROCHE IV·IM ceftriaxone sodium/Roche

71

* ROCEPHIN is indicated in the following infections: bacterial septicemia, bone and joint, intra-abdominal, lower respiratory tract, skin and skin structure, urinary tract, bacterial meningitis and gonorrhea. Please see summary of product information on adjacent page for indicated susceptible organisms.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

Please see adjacent page for summary of product information.

Rocephin® IV·IM

ceftriaxone sodium/Roche

Before prescribing, please consult complete product information, a summary of which follows:

MICROBIOLOGY The bactericidal activity of ceftriaxone results from inhibition of cell wall synthesis Ceftriaxone has a high degree of stability in the presence of beta-lactamases, both penicillinases and cephalosporinases, of gram-negative and gram-positive bacteria Ceftriaxone is usually active against the following microorganisms *in vitro* and in clinical infections (see Indications and Usage)

GRAM-NEGATIVE AEROBES Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae (including ampicillin-resistant strains), *H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *Neisseria gonorrhoeae* (including penicillinase and nonpenicillinase producing strains), *Neisseria meningitidis, Proteus mirabilis, Proteus vulgaris, Morganella morganii* and *Serratia marcescens*

Note Many strains of the above organisms that are multiply resistant to other antibiotics, e.g., penicillins, cephalosporins and aminoglycosides, are susceptible to ceftriaxone sodium

Ceftriaxone is also active against many strains of *Pseudomonas aeruginosa*.

GRAM POSITIVE AEROBES Staphylococcus aureus (including penicillinase-producing strains) and *Staphylococcus epidermidis* (Note methicillin-resistant staphylococci are resistant to cephalosporins, including ceftriaxone), *Streptococcus pyogenes* (Group A beta-hemolytic streptococci), *Streptococcus agalactiae* (Group B streptococci) and *Streptococcus pneumoniae* (Note Most strains of enterococci, *Streptococcus faecalis* and Group D streptococci are resistant)

Ceftriaxone also demonstrates *in vitro* activity against the following microorganisms, although the clinical significance is unknown

GRAM NEGATIVE AEROBES Citrobacter freundii, Citrobacter diversus, Providencia species (including *Providencia rettgeri*), *Salmonella* species (including S *typhi*), *Shigella* species and *Acinetobacter calcoaceticus*

ANAEROBES Bacteroides species, *Clostridium* species (Note most strains of *C difficile* are resistant)

SUSCEPTIBILITY TESTING Standard susceptibility disk method Quantitative methods that require measurement of zone diameters give the most precise estimate of antibiotic susceptibility One such procedure (Bauer AW, Kirby WMM, Sherris JC, Turck M Antibiotic Susceptibility Testing by a Standardized Single Disk Method, *Am J Clin Pathol* 45 493-496, 1966 Standardized Disk Susceptibility Test, *Federal Register* 39 19182-19184, 1974, National Committee for Clinical Laboratory Standards, Approved Standard ASM 2, Performance Standards for Antimicrobial Disk Susceptibility Tests, July 1975) has been recommended for use with disks to test susceptibility to ceftriaxone

Laboratory results of the standardized single-disk susceptibility test using a 30-mcg ceftriaxone disk should be interpreted according to the following three criteria

1 Susceptible organisms produce zones of 18 mm or greater, indicating that the tested organism is likely to respond to therapy
2 Organisms that produce zones of 14 to 17 mm are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained
3 Resistant organisms produce zones of 13 mm or less, indicating that other therapy should be selected

Organisms should be tested with the ceftriaxone disk, since ceftriaxone has been shown by *in vitro* tests to be active against certain strains found resistant to cephalosporin class disks

Organisms having zones of less than 18 mm around the cephalothin disk are not necessarily of intermediate susceptibility or resistant to ceftriaxone

Standardized procedures require use of control organisms The 30-mcg ceftriaxone disk should give zone diameters between 29 and 35 mm, 22 and 28 mm and 17 and 23 mm for the reference strains *E coli* ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853, respectively

DILUTION TECHNIQUES Based on the pharmacokinetic profile of ceftriaxone, a bacterial isolate may be considered susceptible if the MIC value for ceftriaxone is not more than 16 mcg/ml Organisms are considered resistant to ceftriaxone if the MIC is equal to or greater than 64 mcg/ml Organisms having an MIC value of less than 64 mcg/ml, but greater than 16 mcg/ml, are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained

E coli ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853 are also the recommended reference strains for controlling ceftriaxone dilution tests Greater than 95% of MICs for the *E coli* strain should fall within the range of 0 016 to 0 5 mcg/ml The range for the *S aureus* strain should be 1 to 2 mcg/ml, while for the *P aeruginosa* strain the range should be 8 to 64 mcg/ml

INDICATIONS AND USAGE: Rocephin is indicated for the treatment of the following infections when caused by susceptible organisms

LOWER RESPIRATORY TRACT INFECTIONS caused by *Strep pneumoniae, Streptococcus* species (excluding enterococci), *Staph aureus, H influenzae, H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *E coli, E aerogenes, Proteus mirabilis* and *Serratia marcescens*

SKIN AND SKIN STRUCTURE INFECTIONS caused by *Staph aureus, Staph epidermidis, Streptococcus* species (excluding enterococci), *E cloacae, Klebsiella* species (including *K pneumoniae*), *Proteus mirabilis* and *Pseudomonas aeruginosa*

URINARY TRACT INFECTIONS (complicated and uncomplicated) caused by *E coli, Proteus mirabilis, Proteus vulgaris, M morganii* and *Klebsiella* species (including *K pneumoniae*)

UNCOMPLICATED GONORRHEA (cervical/urethral and rectal) caused by *Neisseria gonorrhoeae*, including both penicillinase and nonpenicillinase producing strains

PELVIC INFLAMMATORY DISEASE caused by *N gonorrhoeae*

BACTERIAL SEPTICEMIA caused by *Staph aureus, Strep pneumoniae, E coli, H influenzae* and *K pneumoniae*

BONE AND JOINT INFECTIONS caused by *Staph aureus, Strep pneumoniae, Streptococcus* species (excluding enterococci), *E coli, P mirabilis, K pneumoniae* and *Enterobacter* species

INTRA-ABDOMINAL INFECTIONS caused by *E coli* and *K pneumoniae*

MENINGITIS caused by *H influenzae, N meningitidis* and *Strep pneumoniae* Ceftriaxone has also been used successfully in a limited number of cases of meningitis and shunt infections caused by *Staph epidermidis* and *E coli*

PROPHYLAXIS The administration of a single dose of ceftriaxone preoperatively may reduce the incidence of postoperative infections in patients undergoing coronary artery bypass surgery

Although ceftriaxone has been shown to have been as effective as cefazolin in the prevention of infection following coronary artery bypass surgery, no placebo-controlled trials have been conducted to evaluate any cephalosporin antibiotic in the prevention of infection following coronary artery bypass surgery

SUSCEPTIBILITY TESTING Before instituting treatment with Rocephin, appropriate specimens should be obtained for isolation of the causative organism and for determination of its susceptibility to the drug Therapy may be instituted prior to obtaining results of susceptibility testing

CONTRAINDICATIONS: Rocephin is contraindicated in patients with known allergy to the cephalosporin class of antibiotics

WARNINGS: BEFORE THERAPY WITH ROCEPHIN IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE TO DETERMINE WHETHER THE PATIENT HAS HAD PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS, PENICILLINS OR OTHER DRUGS THIS PRODUCT SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS ANTIBIOTICS SHOULD BE ADMINISTERED WITH CAUTION TO ANY PATIENT WHO HAS DEMONSTRATED SOME FORM OF ALLERGY, PARTICULARLY TO DRUGS SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE THE USE OF SUBCUTANEOUS EPINEPHRINE AND OTHER EMERGENCY MEASURES.

Pseudomembranous colitis has been reported with the use of cephalosporins (and other broad-spectrum antibiotics), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with antibiotic use

ROCEPHIN® (ceftriaxone sodium/Roche)

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia Studies indicate a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis Cholestyramine and colestipol resins have been shown to bind to the toxin *in vitro*

Mild cases of colitis respond to drug discontinuance alone Moderate to severe cases should be managed with fluid, electrolyte and protein supplementation as indicated

When the colitis is not relieved by drug discontinuance or when it is severe, oral vancomycin is the treatment of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile* Other causes of colitis should also be considered

PRECAUTIONS: *GENERAL* Although transient elevations of BUN and serum creatinine have been observed, at the recommended dosages, the nephrotoxic potential of Rocephin is similar to that of other cephalosporins

Ceftriaxone is excreted via both biliary and renal excretion (see Clinical Pharmacology) Therefore, patients with renal failure normally require no adjustment in dosage when usual doses of Rocephin are administered, but concentrations of drug in the serum should be monitored periodically If evidence of accumulation exists, dosage should be decreased accordingly

Dosage adjustments should not be necessary in patients with hepatic dysfunction however, in patients with both hepatic dysfunction and significant renal disease, Rocephin dosage should not exceed 2 gm daily without close monitoring of serum concentrations

Alterations in prothrombin times have occurred rarely in patients treated with Rocephin Patients with impaired vitamin K synthesis or low vitamin K stores (e.g., chronic hepatic disease and malnutrition) may require monitoring of prothrombin time during Rocephin treatment Vitamin K administration (10 mg weekly) may be necessary if the prothrombin time is prolonged before or during therapy

Prolonged use of Rocephin may result in overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Rocephin should be prescribed with caution in individuals with a history of gastrointestinal disease, especially colitis

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY Carcinogenesis Considering the maximum duration of treatment and the class of the compound, carcinogenicity studies with ceftriaxone in animals have not been performed The maximum duration of animal toxicity studies was six months

Mutagenesis Genetic toxicology tests included the Ames test, a micronucleus test and a test for chromosomal aberrations in human lymphocytes cultured *in vitro* with ceftriaxone Ceftriaxone showed no potential for mutagenic activity in these studies

Impairment of Fertility Ceftriaxone produced no impairment of fertility when given intravenously to rats at daily doses up to 586 mg/kg/day, approximately 20 times the recommended clinical dose of 2 gm/day

PREGNANCY Teratogenic Effects Pregnancy Category B Reproductive studies have been performed in mice and rats at doses up to 20 times the usual human dose and have no evidence of embryotoxicity, fetotoxicity or teratogenicity In primates, no embryotoxicity or teratogenicity was demonstrated at a dose approximately three times the human dose

There are, however, no adequate and well-controlled studies in pregnant women Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nonteratogenic Effects In rats, in the Segment I (fertility and general reproduction) and Segment III (perinatal and postnatal) studies with intravenously administered ceftriaxone, no adverse effects were noted on various reproductive parameters during gestation and lactation, including postnatal growth, functional behavior and reproductive ability of the offspring, at doses of 586 mg/kg/day or less

NURSING MOTHERS Low concentrations of ceftriaxone are excreted in human milk Caution should be exercised when Rocephin is administered to a nursing woman

PEDIATRIC USE Safety and effectiveness of Rocephin in neonates, infants and children have been established for the dosages described in the Dosage and Administration section

ADVERSE REACTIONS: Rocephin is generally well tolerated In clinical trials, the following adverse reactions, which were considered to be related to Rocephin therapy or of uncertain etiology, were observed

LOCAL REACTIONS—pain, induration or tenderness at the site of injection (1%) Less frequently reported (less than 1%) was phlebitis after IV administration

HYPERSENSITIVITY—rash (1 7%) Less frequently reported (less than 1%) were pruritus, fever or chills

HEMATOLOGIC—eosinophilia (6%), thrombocytosis (5 1%) and leukopenia (2 1%) Less frequently reported (less than 1%) were anemia, neutropenia, lymphopenia, thrombocytopenia and prolongation of the prothrombin time

GASTROINTESTINAL—diarrhea (2 7%) Less frequently reported (less than 1%) were nausea or vomiting, and dysgeusia

HEPATIC—elevations of SGOT (3 1%) or SGPT (3 3%) Less frequently reported (less than 1%) were elevations of alkaline phosphatase and bilirubin

RENAL—elevations of the BUN (1 2%) Less frequently reported (less than 1%) were elevations of creatinine and the presence of casts in the urine

CENTRAL NERVOUS SYSTEM—headache or dizziness were reported occasionally (less than 1%)

GENITOURINARY—moniliasis or vaginitis were reported occasionally (less than 1%)

MISCELLANEOUS—diaphoresis and flushing were reported occasionally (less than 1%)

Other rarely observed adverse reactions (less than 0 1%) include leukocytosis, lymphocytosis, monocytosis, basophilia, a decrease in the prothrombin time, jaundice, glycosuria, hematuria, bronchospasm, serum sickness, abdominal pain, colitis, flatulence, dyspepsia, palpitations and epistaxis

DOSAGE AND ADMINISTRATION: Rocephin may be administered intravenously or intramuscularly The usual adult daily dose is 1 to 2 gm given once a day (or in equally divided doses twice a day) depending on the type and severity of the infection The total daily dose should not exceed 4 grams

For the treatment of serious miscellaneous infections in children, other than meningitis, the recommended total daily dose is 50 to 75 mg/kg (not to exceed 2 grams), given in divided doses every 12 hours

Generally, Rocephin therapy should be continued for at least two days after the signs and symptoms of infection have disappeared The usual duration is 4 to 14 days, in complicated infections longer therapy may be required

In the treatment of meningitis, a daily dose of 100 mg/kg (not to exceed 4 grams), given in divided doses every 12 hours, should be administered with or without a loading dose of 75 mg/kg

For the treatment of uncomplicated gonococcal infections, a single intramuscular dose of 250 mg is recommended

For preoperative use (surgical prophylaxis), a single dose of 1 gm administered ½ to 2 hours before surgery is recommended

When treating infections caused by *Streptococcus pyogenes*, therapy should be continued for at least ten days

No dosage adjustment is necessary for patients with impairment of renal or hepatic function, however, blood levels should be monitored in patients with severe renal impairment (e.g., dialysis patients) and in patients with both renal and hepatic dysfunctions

HOW SUPPLIED: Rocephin (ceftriaxone sodium/Roche) is supplied as a sterile crystalline powder in glass vials and piggyback bottles The following packages are available

Vials containing 250 mg equivalent of ceftriaxone Boxes of 10 (NDC 0004 1962-01)
Vials containing 500 mg equivalent of ceftriaxone Boxes of 10 (NDC 0004 1963-01)
Vials containing 1 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1964-01)
Piggyback bottles containing 1 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1964-03).
Vials containing 2 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1965-01)
Piggyback bottles containing 2 gm equivalent of ceftriaxone Boxes of 10 (NDC 0004 1965-03)
Bulk pharmacy containers, containing 10 gm equivalent of ceftriaxone Boxes of 1 (NDC 0004 1971-01)

NOT FOR DIRECT ADMINISTRATION

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

References:

1. Data on file, Hoffmann-La Roche Inc.
2. Patel IH, Kaplan SA. *Am J Med* 77:17-25, Oct 19, 1984.
3. Richards DM, *et al*: *Drugs* 27:469-527, 1984.
4. Cleeland R, Squires E: *Am J Med* 77:3-11, Oct 19, 1984
5. Tanner DJ, Nazarian MQ: *Am J Med* 77:104-111, Oct 19, 1984.

To show you how many hypertensives stayed on INDERAL® LA (PROPRANOLOL HCl) after a major nationwide trial...

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL LA stayed on INDERAL LA.[1*]

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.
A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl)
LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

NOW AVAILABLE...
NEW LOW DOSE
INDERAL® LA 60 mg
(PROPRANOLOL HCl)
LONG ACTING CAPSULES

Please see next page for brief summary of prescribing information

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period, the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours, then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

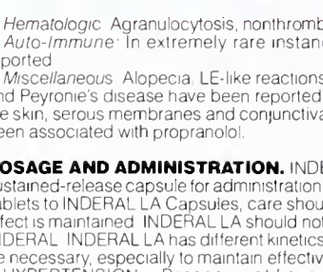
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18 month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose. There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. Pharyngitis and agranulocytosis; erythematous rash; fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia. LE-like reactions, psoriasiform rashes, dry eyes, male impotence and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

1R7119/887

Ayerst AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Congenital esotropia. Leonard B. Nelson, MD, Rudolph S. Wagner, MD, John W. Simon, MD, et al. Survey of Ophthalmology, Inc, *Survey of Ophthalmology,* vol 31, no 6, May-June 1987, pp 363–383.

Congenital esotopria represents the most common type of strabismus. Its pathogenesis, however, remains uncertain. It is typically characterized as a large angle, constant esotropia with onset during the first six months of life. Associated clinical findings include normal refractive errors for age, amblyopia, dissociated vertical deviation, inferior oblique muscle overaction, and nystagmus. It must be distinguished from Duane's retraction syndrome, Moerbius syndrome, nystagmus blockage syndrome, and early onset accommodative esotropia, as well as other causes of esotropia in infancy. The surgical management may involve recession of both medial recti muscles, unilateral recession of a medial rectus muscle, and a resection of a lateral rectus muscle or three or four muscle surgery.

Aerobic exercise in pregnancy. Pat J. Kulpa, MD, Bridge M. White, MA, and Robert Visscher, MD. The C.V. Mosby Company, *American Journal of Obstetrics and Gynecology,* vol 156, 1987, pp 1395–1403.

The effect on fetal and maternal outcome in gestational exercise in a recreational athlete was investigated in a 2½-year prospective study. A training effect in a pregnant subject engaged in aerobic exercise was also determined. One hundred forty-one low-risk pregnant subjects had their aerobic capacity tested during the first trimester, during the third trimester, and postpartum. Predicted maximum oxygen consumption values were determined by using standard Bruce treadmill protocol during the first and third tests and the Astrand protocol for submaximal testing on a bicycle ergometer during the third trimester. Exercise prescriptions were given. The primiparous and multiparous subjects were randomized into control and exercise groups, differing only in the frequency of aerobic exercise. The results showed that exercise had no associated increase in neonatal morbidity and obstetric complications. All subjects improved or maintained their level of aerobic fitness. The exercisers showed a significant training effect. The disparity in the second test's results may suggest that the physiologic characteristics of pregnancy masked the aerobic improvement.

Sweet's syndrome and malignancy. Philip R. Cohen, MD, and Razelle Kurzrock, MD. Technical Publishing, *American Journal of Medicine,* vol 82, June 1987, pp 1220–1226.

Acute febrile neutrophilic dermatosis (Sweet's syndrome) is characterized by pyrexia, neutrophilia, and the abrupt appearance of erythematous, painful, cutaneous plaques, primarily on the upper extremities, head, and neck. Histologically, the salient feature is a dense dermal infiltrate of neutrophils. Approximately 10% to 15% of published cases of Sweet's syndrome occurred in patients with cancer. This report reviews the 39 patients with malignancy-associated Sweet's syndrome described in the world literature and compares Sweet's syndrome in cancer patients with the idiopathic form of the disease. The most common associated malignancy was acute myelogenous leukemia. However, other myeloproliferative disorders, lymphoprolifcrative disorders, myelodysplastic syndrome, and carcinomas have been observed. Importantly, the diagnosis of Sweet's syndrome was often the presenting sign of a new or recurrent tumor. The presence of anemia, abnormal platelet counts, immature cells in the differential, and/or severe vesiculobullous or ulcerative cutaneous lesions is infrequent in idiopathic Sweet's syndrome and should alert physicians to the possibility of a more serious underlying disease. Extracutaneous manifestations may occur and most often involve the musculoskeletal system. Response to systemic steroids is dramatic in virtually all patients, regardless of the presence of malignancy.

Parkinson's disease in the elderly: current management strategies. Michael J. Aminoff, MD. Harcourt Brace Jovanovich, *Geriatrics,* vol 42, no 7, July 1987, pp 31–37.

Parkinson's disease generally responds well to dopaminergic therapy, but there is no unanimity concerning the optimal time for introducing dopaminergic medication. Dose-related side effects of these drugs may respond to a drug holiday, and fluctuations in response to levodopa may sometimes be helped by addition of bromocriptine to the drug regimen. Anticholinergic drugs, tricyclic compounds, and amantadine may sometimes lead to benefit, but any antiparkinsonian effect is often disappointing. Mental side effects may occur with all of the antiparkinsonian drugs, particularly the anticholinergic agents, and especially in the elderly.

Now Available

The Health Policy Agenda for the American People

A Comprehensive Framework for the Future

After five years of collaborative effort, The Health Policy Agenda for the American People (HPA) has issued its Summary and Final Reports recommending policy guidelines for the future of our health care system. This landmark effort establishes a comprehensive, long-term framework for U.S. health policy into the 21st century.

Broad Reaching Recommendations

The HPA Reports contain guiding principles and specific policy recommendations covering a wide subject area:

- supplying, distributing and educating health professionals
- providing technology and facilities
- organizing resources
- communicating health information
- ensuring quality
- paying for services
- preparing for the future through research

A Health Policy Partnership

Representatives of the health professions, insurers, health care institutions, consumer organizations, business groups and the government collaborated to develop recommendations that reflect this broad array of viewpoints. Learn what the HPA has recommended on your behalf... and how it will affect your future.

Order Now

To order your copies of the HPA Summary and Final Reports **call toll-free 1-800-621-8335. In Illinois call collect 312/645-4987.** Or complete and mail the form below with your payment to:
The Health Policy Agenda for the American People
P.O. Box 10946
Chicago, Illinois 60610-0946
Order No. OP-207

Order Form

Please send me _____ copies of the HPA Summary and Final Reports (OP-207) at $35 for the two volume set.

Subtotal _____
Sales tax (IL, NY residents) _____
Total _____

Name _____

Address _____

City _____ State/Zip _____

Please charge my: ☐ VISA ☐ MASTERCARD

Credit Card Number _____ Expiration Date _____

Signature _____ Phone _____

Payment must accompany order. Please allow 4-6 weeks for delivery.
For information on bulk purchases, please call 312/280-7168.

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should be typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

When citing clinical laboratory data, please report in conventional units, followed in parentheses by Systeme International (SI) units.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: Council of Biology Editors style manual: a guide for authors, editors, and publishers in the biological sciences. 4th ed. Council of Biology Editors, Inc, 1978. Distributed by the American Institute of Biological Sciences, Arlington, VA.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, and are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Author, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, consultants, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within one month of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Feature

Wrap-up, part II: 70th Legislature postmortem

While budget considerations dominated the 70th Texas Legislature, the session also produced meaningful results for medicine. Depending on the situation, Texas Medical Association protected the status quo or broke new ground. TMA also was a leader in keeping tort reform on the legislative agenda. The association's tort reform program took a tactical turn when the Council on Legislation decided to withdraw from pursuit of a constitutional amendment and take a new approach to the problem.

The following article offers insight into the rationale guiding TMA's legislative activities and looks at what's ahead for professional liability issues.

The 70th Texas Legislature adjourned *sine die* (literally, "without another day") after a special session that ended in late July. The lawmakers passed the largest tax bill in the state's history and, with less fanfare, significant medical legislation.

It is difficult to encapsulate the previous session in a few paragraphs; however, certain accomplishments should be mentioned:

1. TMA has enhanced greatly its reputation and credibility during this session, particularly among adversarial groups. We spent more time plowing the common philosophical ground of patient care and frequently worked with other patient advocacy organizations, providing either political or technical support to their appropriations and public health issues.

2. TMA assumed a leadership role on several public health issues. Texas would not have an AIDS policy or substantive legislation protecting our blood supply had the association not stepped in. We used medical and scientific knowledge in concert with political strokes in the legislative process, to our patients' benefit. Working with an array of interest groups, including Texas' gay activist organizations, the Texas Civil Liberties Union, and the Texas Department of Health, our efforts defused a potentially divisive and unproductive debate and avoided the politicization of this controversial issue.

3. We turned several potentially disastrous issues into major legislative successes. Of these, the most illustrative example was our handling of the difficulties of the Texas State Board of Medical Examiners, using that crisis to assure (a) proper funding of this vital agency and (b) passage of substantive improvements in the peer review process and the administrative and disciplinary functions of the board.

4. For all practical purposes, direct patient care taxes were averted, a feat in itself. Most physicians were not aware of the seriousness of the threat that the legislature would impose either a fee/service tax, a physician "profit" tax, or an insurance tax that would have impacted medical care through several applications. The "occupational tax" of $110 is minor; physicians will pay it once each year during the next biennium, then it will cease. There were times in the closing days of the session that the amount being contemplated was more than $1,500.

5. The erosion of the Medical Practice Act by numerous allied health care groups was halted, and new—not to mention somewhat unusual—alliances were formed in the process. Our professional and political relationships with our allies in the health care delivery system were uniformly cooperative and when conflicts arose, they were resolved in a professional manner.

6. For the first time in recent legislative history, the trial lawyers faced a unified business and professional front on tort legislation, and substantive changes were made. Clearly, these are insufficient for reversing the dangerous escalation in liability suits and premiums, but we managed to keep a politically dead issue alive and force a special session. TMA's Council on Legislation decided unanimously to withdraw—for the time being—the proposed constitutional amendment that would have validated the tort reforms enacted in 1977. It was an unpleasant but wise tactical choice. Passing the proposal would have cost the association more than $1 million in promotional activities. In return, the amendment would have affected rates only moderately after three to five years' lead time, and arguably could have compromised our political strength, which will be necessary to pass broader reforms in 1989, the date of the next regular session.

It has become painfully clear that the Texas Supreme Court, not the legislature, is writing our tort laws. Our courts have expanded theories of recovery, thus increasing the value of lawsuits and the cost of liability, which predictably limit access to medical care. Our legal/insurance liability system is broken and needs to be fixed. It is no longer fault-based (our most highly specialized and skilled doctors are the most frequently sued), and a grossly disproportionate amount of money goes to the system and not to the injured party. Medical care for the most seriously ill or injured literally is being priced out of existence because of the frequency of patient claims against doctors. This is the cost that society will pay for seemingly limitless and unbridled access to the courthouse.

While respect for the interest of our patients limits how far our legislature should go on restricting litigation, the results of unlimited access are readily apparent: Nearly one half of Texas' family physicians have stopped delivering babies; 13% to 40% of our medical bills are attributable to defensive medicine; nearly a quarter of Texas' obstetricians have stopped or soon will stop delivering babies.

We must recognize the possibility that all our statutory efforts may only buy us some time before the next wave of tort claims crests, disenfranchising entire classes of patients from an already weakened medical care delivery system. We need a sensible, empirical basis for determining how to fix or even supplant our existing tort/liability system. Moreover, the interested parties and participants in this system need to set aside gamesmanship, economic self-interest, and political motives to halt this tragic savaging of medical care.

It is ironic that at a time when medical science never before has been able to do so much for so many, physicians are at their greatest risk of suit. The finger-pointing and blame-seeking must stop.

WILLIAM G. GAMEL, MD
Chairman, TMA Council on Legislation.

Texas Medical Association Member Services

Membership in the Texas Medical Association reflects the importance that you place on providing the highest quality of health care to the people of Texas. But membership in TMA also directly benefits you through TMA member service programs. All TMA member service programs are thoroughly evaluated and carefully monitored so that you are assured of receiving the highest quality programs for a very competitive price. The TMA member service programs can save you many times over your annual dues amount and make a big difference to your "bottom line."

Practice Enhancement Programs

Group Insurance Programs

Medical Equipment Leasing Program

Discount Credit Card Program for Patient Use

Medical Market Analysis Demographic Profile

Practice Management Workshops

Discount Magazine Program

I.C. System Collection Program

Physician's Placement Service

Personal Services

InterFirst Bank-Dallas Line-of-Credit Program

Discount Automobile Purchase/Lease Program

Gold MasterCard Program

Avis Rent-A-Car Program

Reduced Rates at InterContinental Hotels

For information on these member service programs, please contact the Member Services Department at 512 477-6704.

Practice Management Systems, Inc.

Presents

XL1™

A Complete Accounts Receivable and Insurance Claim Personal Computer Software Solution

Features

- Menu Driven
- On Screen help
- Up to 15 physicians capability
- Open item or balance forward accounting
- Diagnosis codes
- Procedure codes with automatic charges
- Multiple procedure and diagnosis codes
- Point of service billing statement
- Patient insurance case history
- Third party billing
- Prints insurance claim forms
- Itemized billing statements/Super Bill
- Account and Patient name search
- Insurance coverage to support forms
- Electronic claims transmissions
- Two way statement mailers
- Backup and restore of your patient data
- Security and password protection
- Color or monochrome screens
- Multiple terminal support

Daily Reports
- Production Analysis
- Deposit Totals
- Transaction Audit
- Financial Summary
- Write Off Totals

Monthly Reports
- Practice Analysis
- Procedure Code Analysis
- Diagnosis Code Analysis
- Financial Summary

Other Reports
- Account & Patient Ledgers
- Delinquency Notices
- Recall Notices
- Appointment Scheduling
- Referring Physicians
- Inactive Patients
- Insurance Carrier Aging
- Fee Slips
- * More than 15 others

XL1 has been through 3 years of development and field testing. We have over 250 systems in operation in more than 20 states. We guarantee your satisfaction. You may return the product for any reason within 90 days for a full refund.

Pricing Schedule

Single Terminal Package	**$1,450**
Multiple Terminal Package	**$1,950**
One Year Support and Enhancements	**$ 300**

(first year of support and enhancements are free)

Practice Management Systems, Inc.
9450 Two Notch Road
Columbia, S.C. 29223

demo system available

(803) 736-2940

"Mbotay, pasi wapi?" ("Hello, where does it hurt?")

Dr Van Hare gets acquainted with visitors to the CEUM Karawa Mission Hospital.

During the early part of 1987, Robert S. Van Hare, MD, interrupted his fourth-year studies at Baylor College of Medicine to work as a medical missionary in Zaire. With financial assistance from the Reader's Digest International Fellowship and Baylor's Alumni Fund and "marginal proficiency" in French, the language of the educated Zairians, and Lingala, a trade language, Dr Van Hare traveled to the Central African nation to assist four physicians who regularly staff a 170-bed Zairian hospital.

The following article is a first-person account of Dr Van Hare's adventure. "The experience of working in a mission hospital in a third world nation made a tremendous impact on me," he says. "I decided to write a short article about my overseas clerkship to tell other medical students and physicians what a rewarding opportunity short-term medical mission work offers."

Dr Leo Lenoie counsels a leprosy patient at a village clinic.

It began like any other day of medical school: up, dressed, and out the door before the rest of the world hit their snooze alarms for the first time. However, today there would be no lab values to check, no x-rays to find, no patients to jostle out of bed at 5 am for their daily exams. Today, rounds would entail a trip through morning rush-hour traffic to the airport and a flight to CEUM Karawa Mission Hospital in the Ubangi region of Zaire.

The butterflies in my stomach were having a field day. What would the hospital be like? What would they expect of a medical student? Had I studied enough tropical medicine? Could I communicate with the patients beyond, "Mbotay, pasi wapi?" (Hello, where does it hurt?) How long could I survive on antelope and grubs? I kept trying to recall a verse from Philippians that dealt with dismissing anxiety from the mind and keeping oneself open to God's peace.

I kept pinching myself as I flew over the dense jungles and the fields of sobi grass. I couldn't believe I actually was flying into Zaire. I had been planning a short-term medical mission for more than a year and a half. I wanted to learn about missionary medicine and to work in a mission hospital. Perhaps I was being called to serve as a medical missionary. I didn't know about that, but I did hope I would be able to help in the hospital without getting in the way. As our single-engine plane bounced to a stop on the grass-covered airstrip, all these thoughts that had been racing through my mind screeched to a halt. I was at Karawa, and, yes, Dorothy, it was a long way back to Kansas.

Karawa is a well-established mission station, which has been in operation for more than 50 years. The hospital has more than 170 beds, which are virtually 100% filled. Two Americans, one Canadian, and one Zairian doctor manage this astounding patient load. They also carry out administrative chores and oversee an extensive dispensary system throughout the Ubangi-Mongala region of Zaire. If that wasn't enough of a workload, they now had an anxious, greenhorn, fourth-year medical student to keep track of.

It didn't take long to get my feet wet. Day one in the operating room, Dr Roger Thorpe said, "Well, there's the appendix, go after it." My educational experience continued to grow from there. Karawa has two operating rooms. The small operating room, or "hernia suite," was used primarily by the African nurse-surgeons and an eager medical student who jumped at the chance to do hernia repairs. There seemed to be a never-ending supply of hernias among the native people. The calendar was booked solid with two to three hernia cases per day for the next three months, in addition to the regularly scheduled major operations.

In the main operating room I first assisted "Dr Rog" with everything from eye surgeries and orthopedic procedures to cystectomies and a plethora of gynecologic operations—a general surgeon at Karawa does it all. With no other doctors or facilities in the immediate area, we had to perform the surgery or the patient would have to do without. I admired this "can do" missionary spirit. I probably received more hands-on surgical experience during those two months than many first-year residents do in an entire year. However, the one aspect of my surgical experience that most impressed me was the practice of everyone from the anesthetist to the scrub nurse and surgeon taking turns praying with the patient before the operation began. We

ROBERT S. VAN HARE, MD
7900 N Stadium, #93, Houston, TX 77030.

operated as a team united in thought and spirit.

Afternoons at Karawa were spent in the clinics. The dispensary nurse screened patients and sent the more severe or complicated cases to the doctors. I spent my time floating among three examination offices: surgical with Dr Roger Thorpe, medical with Dr Leo Lenoie and Dr Jerome Montanga, and pediatrics with Dr Helen Berquist. Trying to describe the diversity of cases that I saw would be like thumbing through *Harrison's Principles of Internal Medicine.*

After a few days in the clinic I concluded: All fevers were due to malaria until proven otherwise; most of the suspected carcinomas were so advanced that little could be done; obesity was a sign of prosperity in Zaire, and few of the natives were cursed with it. When we received calls during the night, they were one of two types: The routine cases that the African nurses and I could handle, such as cesarean sections, ruptured uteri, and incarcerated hernias; or more complicated cases that required medical staff supervision, such as shock, severe infant dehydration/infection, and multiple traumatic injuries.

This schedule was the norm except for one fateful week in February during which I underwent the rites of passage into missionary medicine. During that week the permanent missionaries attended their yearly conference, leaving Dr Montanga and me to run most of the hospital. My marginal proficiency in French and Lingala improved quickly under fire. I learned what it felt like to make major medical decisions and be responsible for the outcomes. That week was a big step on my way to becoming a doctor.

In addition to the main mission hospital, Karawa operates a network of rural dispensaries. Native people, trained at Karawa's nursing school, run these village outposts. On a motorcycle I just learned to ride, I traveled over rutted roads, dodging potholes and chickens, in order to visit and treat patients at these clinics. Some dispensaries were fortunate enough to have solar refrigerators to store fragile vaccines. The majority, however, had only a bare-bones supply of medicines, equipment, and antibiotics.

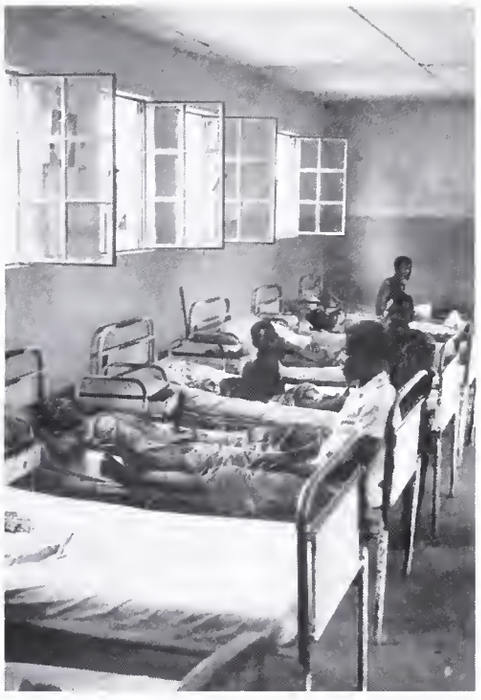
One of my most memorable experiences came during a clinic trip to see leprosy patients. I had been reading *Fearfully and Wonderfully Made* by Dr Paul Brand, and was on the chapter telling of his struggles to heal the feet of a leprosy patient. While we set up our outdoor clinic, an elderly woman came forward. She already was receiving leprosy medications, but the disease had left her scarred, infected feet without sensation. She was to be fitted for a pair of special padded shoes made at Karawa to protect her feet from further trauma. As I sat under that mango tree debriding and bandaging the feet of this old woman, I recalled the story of Christ washing his disciples' feet, and I was filled with a wonderful feeling of service.

Some of the saddest cases were the dehydrated, malnourished children. They all had little shrunken faces that made them look 60 years old. As hard as we tried, few of them lived. Infant mortality in this region was close to 40%. Many times, exhaustion would creep in before day's end. But my fatigue didn't seem to matter quite as much after I met an elderly gentleman, late one afternoon, who had been walking for four days in order to see the doctor. There were so many who needed medical attention, but because of the lack of equipment and supplies, and the sheer volume and severity of their medical problems, palliative therapy was all we could offer many patients.

The medical mission staff and the trained native nurses and technicians worked grueling hours to try to meet this medical need. These nurse-surgeons and dispensary nurses showed great pride in their work. A quotation in French on the wall in one of the clinics I visited exemplified the zeal and national pride of the Zairian health care providers: "Un citozen Zai—Rois Qui se vouve a la construction de son pays est un etre libre," which means, "A Zairian citizen who devotes himself to the construction of his country is a free soul."

During my stay in Zaire, I developed a deep feeling of compassion for the African people, and in the process my spiritual life as well as my medical knowledge grew. Some day I hope to return to the jungles of Zaire to continue this medical and spiritual outreach.

Patients and their families rest in the hospital's surgical ward.



Zairian nurses post an eye chart at a leprosy clinic.

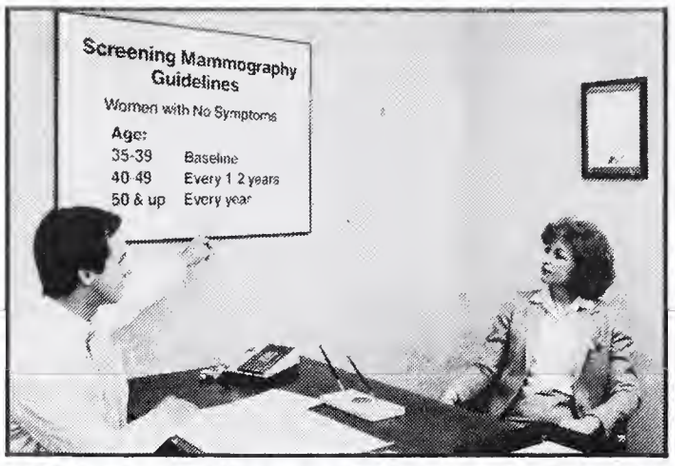
A Referral Center for Cardiopulmonary Diseases

Clinical Services and Consultations

- Cardiovascular Diagnosis and Surgery
- Infectious Disease
  Atypical Mycobacteria, Pneumonia
  & Related Diseases, Tuberculosis
- Oncology
- Outpatient Care
- Pediatric Respiratory Disorders
  Allergy, Asthma, Cystic Fibrosis
  Pneumonia, Tuberculosis
- Pulmonary (Adult)
  Emphysema & Chronic Bronchitis
  Occupational Lung Diseases
  Pulmonary Physiology
  Pulmonary Infiltrative Disease
  Sleep-Related Breathing Disorders
  Pulmonary Rehabilitation
  Undiagnosed Pulmonary Masses
- Radiology • Smoking Cessation
- Thoracic Surgery

The University of Texas Health Center at Tyler

Located on Highway 271 at SH 155, 5 miles north of Tyler. Mailing address:
P.O. Box 2003, Tyler, TX 75710. For information and referral call: 1-800-442-8842



What will you tell her about screening mammography?

Many of your patients will hear about screening mammography through a program launched by the American Cancer Society and the American College of Radiology, and they may come to you with questions. What will you tell them?

We hope you'll encourage them to have a screening mammogram, because that, along with your regular breast examinations and their monthly self examinations, offers the best chance of early detection of breast cancer, a disease which will strike one woman in 10.

If you have questions about breast cancer detection for asymptomatic women, please contact us

AMERICAN CANCER SOCIETY Professional Education Dept
National Headquarters
90 Park Avenue
New York, New York 10016
or your local society

American College of Radiology 1891 Preston White Dr
Reston, Virginia 22091
(703) 648-8900

HMSS Cassette Tapes Available

Cassette tapes will be available for purchase by mail of the September 12, 1987, TMA-Hospital Medical Staff Section meeting.

Issues to be discussed include:

- **Health Care Quality Act of 1986 and the Texas Medical Practice Act Amendments, by the General Counsels of the Texas State Board of Medical Examiners and Texas Medical Association**
- **Patient Transfer Problems—What Are They and How Can They Be Resolved, by the Bureau Chief, Hospital Licensing and Certification, Texas Department of Health**
- **JCAH Update of the Impact of Initiatives and Activities, by the Vice President, Harris Hospital-Methodist, Fort Worth.**

For further information and to order tapes, contact the Hospital Medical Staff Section at TMA Headquarters (512) 477-6704, 1801 North Lamar, Austin 78701.

Medicine and the Law articles are intended to help physicians understand the law by providing legal information on selected topics. This article is published with the understanding that TMA is not engaged in providing legal advice. When dealing with specific legal matters, readers should seek assistance from their own attorneys.

Peer review update—new tools and requirements

Two significant events are taking place with respect to peer review: the federal Health Care Quality Improvement Act of 1986 reporting requirements take effect Nov 14, 1987, and the federal act's peer review protections, along with the 1987 amendments to the Texas Medical Practice Act, take effect Sept 1, 1987 (1). Physicians should have a working knowledge of both of these statutes as they impact on their peer review and reporting responsibilities in both hospital and medical society settings. A summary of these new requirements and tools designed to enhance peer review and medical discipline follows.

Reporting requirements on physicians
Each physician and all peer review committees are required to report to the Texas State Board of Medical Examiners (TSBME) any physician or medical student whose acts or omissions, through a lack of competence, impaired status, or failure to care adequately for patients, constitutes a real and present danger to the health of his or her patients (2). The statute gives special consideration to impaired physicians who participate in programs sponsored by physician health and rehabilitation committees (3). Information about physicians who are impaired or reasonably believed to be may be reported to a health care entity where the physician has clinical privileges. It must be reported to the TSBME and health care entity, if known, if the peer review committee determines that the impaired physician poses a continuing threat to the public welfare in practicing medicine.

Counterclaims authorized to protect peer review
A person, committee, or entity named as a defendant in any civil action as a result of participating in peer review may file a counterclaim in any pending action. A cause of action in a subsequent suit also may be filed to recover any defense costs, including court costs, attorney's fees, and any damages incurred as a result of the civil action if the plaintiff's original suit is determined to be frivolous or brought in bad faith (4). This provision should help tip the scales toward protecting those involved in peer review as it provides a remedy for the conscientious physician involved in peer review and a risk for those filing unfounded lawsuits designed to intimidate the reviewers.

TSBME information
Generally, information reported to the TSBME is confidential (5). However, the TSBME may disclose this confidential information to appropriate licensing authorities and to medical societies and hospital peer review committees when involved in hospital staff privilege matters. Some board information is not confidential. All disciplinary orders of the board and known hospital suspensions for 30 days or longer relating to the physician's competence now will be open to the public for scrutiny (6).

Other immunities and privileges
Both the federal and the state statutes provide peer review protections and immunities for peer review activities. Under state law, peer review proceedings are confidential and not discoverable in professional liability actions (7). The information used in denying staff privileges is available to the physician subject to a medical staff privilege review. However, this proper use, essential for due process and fairness, does not waive the privilege in other proceedings (8). Safeguards were statutorily created to avoid unintended waivers of the privilege.

Peer review proceedings may be disclosed to other peer review committees without waiving the privilege, as well as to the TSBME, federal agencies, or state licensure boards, and criminal investigative bodies (9). The state statute provides that no cause of action can accrue against persons or entities reporting, without malice, to the TSBME (10).

Hospital disciplinary reports required
Health facilities or their medical peer review committees must report in writing to the TSBME (1) the results and circumstances of any professional review action that adversely affects the clinical privileges of a physician for a period longer than 30 days, (2) the surrender of clinical privileges by a physician while the physician is under an investigation by the medical peer review committee relating to possible incompetence or improper professional conduct, or (3) the surrender of clinical privileges in return for not conducting such an investigation (11).

These requirements are identical to those found in the 1986 federal act, which provides that the information shall be reported regularly and at least monthly to not only the TSBME but also to a private or public agency designated by the secretary of Health and Human Services (HHS) (10). (Such designation has not been made as of this writing. The American Medical Association and the American Federation of State Medical Boards have applied jointly to be the depository for these reports.) The reports are to include the name of the practitioner, the description of the acts or omissions involved, and other information required by the HHS secretary. (Proposed regulations implementing this federal law were not issued at the time of this writing.) The TSBME, in turn, is required to report this information to the HHS secretary or his designee (12).

Medical society required reports
Similar requirements are placed on medical societies when professional review action adversely affects the membership of a physician in the society or association. Under state law a report must be made to the TSBME within 30 days. The federal law requires further that a report be filed with the HHS secretary or his designee (11).

Credentialing requirements
The federal act requires each hospital to request information reported under the act from the HHS secretary (or designee)

at the time a physician or "licensed health care practitioner" applies for clinical privileges or membership. Also, every two years the hospital must request information on physicians on its staff who have been granted clinical privileges. Information also may be requested at other times (12).

According to the federal act, a hospital that does not request information respecting a physician as required is presumed to have knowledge of any information reported. Thus, a hospital that failed to request information could be compromised in defending a claim. The assertion would be that the hospital was negligent in its credentialing of a physician where the information that was available but not requested as required was adverse to the physician (12).

In the event the information provided by the federal clearinghouse is false, the hospital that relies on that information is protected from liability unless the hospital knew it was false (12).

Requirements for peer review immunity

The state law provides that those involved in medical peer review are immune from liability if they perform their activities "without malice" or "in good faith" (13). The federal requirements are more detailed. Therefore, if a physician involved in peer review is challenged in a court, the following protections and immunities apply.

Persons providing information to a professional review body regarding the competence or professional conduct of a physician cannot be held liable under any law of the United States or of any state unless the information is false and the person providing it knew that the information was false (14).

Additional protection is provided to the professional review body, any person acting as a member or staff to the body, any person under contract or other formal agreement with the body, and any person who participates with or assists the body. None shall be liable for damages with respect to any "professional review action." (Certain limited exceptions for civil rights violations and antitrust actions are provided) (15). "Professional Review actions" are actions based on the competence or professional conduct of an individual physician and adversely affecting a physician's clinical privileges or membership in a professional society. They include decisions not to take action (eg, not expand privileges or elevate membership) as well as decisions to take action.

Specifically excluded from this definition is action based on:

a. the physician's association or lack of association with a professional society or association,

b. the physician's fees, advertisements, or other competitive acts intended to solicit or retain business,

c. the physician's participation in prepaid group health plans, salaried employment, or any other manner of delivering health services whether on a fee-for-service or other basis,

d. the physician's association with or delegation of authority to members of another class of health care practitioner, or

e. any other matter that does not relate to a physician's competence or professional conduct (eg, utilization review motivated by cost considerations) (16).

Review protocol

Other requirements for peer review immunities provide that the professional review action must be taken

a. in the reasonable belief that action furthers quality care,

b. after a reasonable effort to obtain the facts of the matter,

c. after adequate notice and hearing procedures are afforded to the physician, and

d. in the reasonable belief that the facts warrant the action (17).

The hospital or medical society has met the adequate notice and hearing requirements if a series of conditions are met, including:

(1) NOTICE OF PROPOSED ACTION.—The physician has been given notice stating—

(A)(i) that a professional review action has been proposed to be taken against the physician,

(ii) reasons for the proposed action,

(B)(i) that the physician has the right to request a hearing on the proposed action,

(ii) any time limit (of not less than 30 days) within which to request such a hearing, and

(C) a summary of the rights in the hearing under paragraph (3).

(2) NOTICE OF HEARING.—If a hearing is requested on a timely basis under paragraph (1)(B), the physician involved must be given notice stating—

(A) the place, time, and date, of the hearing, which date shall not be less than 30 days after the date of the notice, and

(B) a list of the witnesses (if any) expected to testify at the hearing on behalf of the professional review body.

(3) CONDUCT OF HEARING AND NOTICE.—If a hearing is requested on a timely basis under paragraph (1)(B)—

(A) subject to subparagraph (B), the hearing shall be held (as determined by the professional review body)—

(i) before an arbitrator mutually acceptable to the physician and the health care entity,

(ii) before a hearing officer who is appointed by the entity and who is not in direct economic competition with the physician involved, or

(iii) before a panel of individuals who are appointed by the entity and are not in direct economic competition with the physician involved;

(B) the right to the hearing may be forfeited if the physician fails, without good cause, to appear;

(C) in the hearing the physician involved has the right—

(i) to representation by an attorney or other person of the physician's choice,

(ii) to have a record made of the proceedings, copies of which may be obtained by the physician upon payment of any reasonable charges associated with the preparation thereof,

(iii) to call, examine, and cross-examine witnesses,

(iv) to present evidence determined to be relevant by the

hearing officer, regardless of its admissibility in a court of law, and

(v) to submit a written statement at the close of the hearing; and

(D) upon completion of the hearing, the physician involved has the right—

(i) to receive the written recommendation of the arbitrator, officer, or panel, including a statement of the basis for the recommendations, and

(ii) to receive a written decision of the health care entity, including a statement of the basis for the decision (17).

The federal act does not require each of these steps, but offers them as examples of what fair proceedings involve. The act also encourages adoption of these steps by creating the presumption that a fair proceeding was conducted if all these steps were followed.

Future developments

Regulations implementing the Health Care Quality Improvement Act of 1986 and the Texas Medical Practice Act amendments of 1987 will follow shortly. As these regulations are issued, they will be analyzed and presented in this column.

DONALD P. "ROCKY" WILCOX, JD
TMA General Counsel

REFERENCES

1. 42 USCA sec 11134(a) (West pamphlet 1987); HB 2560 (6/1/87).
2. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b sec 5.06(b) (Vernon Supp 1988).
3. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06(d), (Vernon Supp 1988).
4. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsection (p) (Vernon Supp 1988).
5. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 4.05(d) (Vernon Supp 1988).
6. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsection (s) (Vernon Supp 1988).
7. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsection (q) (Vernon Supp 1988).
8. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsection (j) (Vernon Supp 1988).
9. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsections (h) and (j) (Vernon Supp 1988).
10. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsections (l) and (m) (Vernon Supp 1988).
11. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsection (b) (Vernon Supp 1988) and 42 USCA secs 11133 and 11134 (West pamphlet 1987).
12. 42 USCA sec 11135 (West pamphlet 1987).
13. HB 2560, sec 18 (6/1/87), amending Tex Rev Civ Stat Ann, art 4495b, sec 5.06 by adding subsections (m) and (t) (Vernon Supp 1988).
14. 42 USCA sec 11111(a)(2) (West pamphlet 1987).
15. 42 USCA sec 11111(a)(1) (West pamphlet 1987).
16. 42 USCA sec 11151(9) (West pamphlet 1987).
17. 42 USCA sec 11112 (West pamphlet 1987).

The Travelers Insurance Company is in the process of establishing Preferred Provider Organizations in the Austin, Dallas, Houston, and San Antonio areas. The Preferred Provider Organizations are being established in connection with The Travelers intent to offer preferred provider benefit plans in such areas.

Practitioners interested in further information, including opportunities to participate, should write to the following addresses of the respective Travelers Health Network offices by October 1, 1987:

Austin
Robert Watkins
Travelers Health Network
of Texas, Inc.
Southpark 1
1701 Directors Boulevard
Suite 580
Austin, TX 78744

Houston
Nancy Cartie
Travelers Health Network
2000 Post Oak Boulevard
Suite 1650
Houston, TX 77056

Dallas
Kyle Anne Raffaniello
Travelers Health Network
545 E. Carpenter Freeway
Suite 600
Irving, TX 75062

San Antonio
Thomas Jackson
Travelers Health Network
of Texas, Inc.
San Antonio Division
Colonnade 1
9901 IH-10 West
Suite 300
San Antonio, TX 78230

The Travelers

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

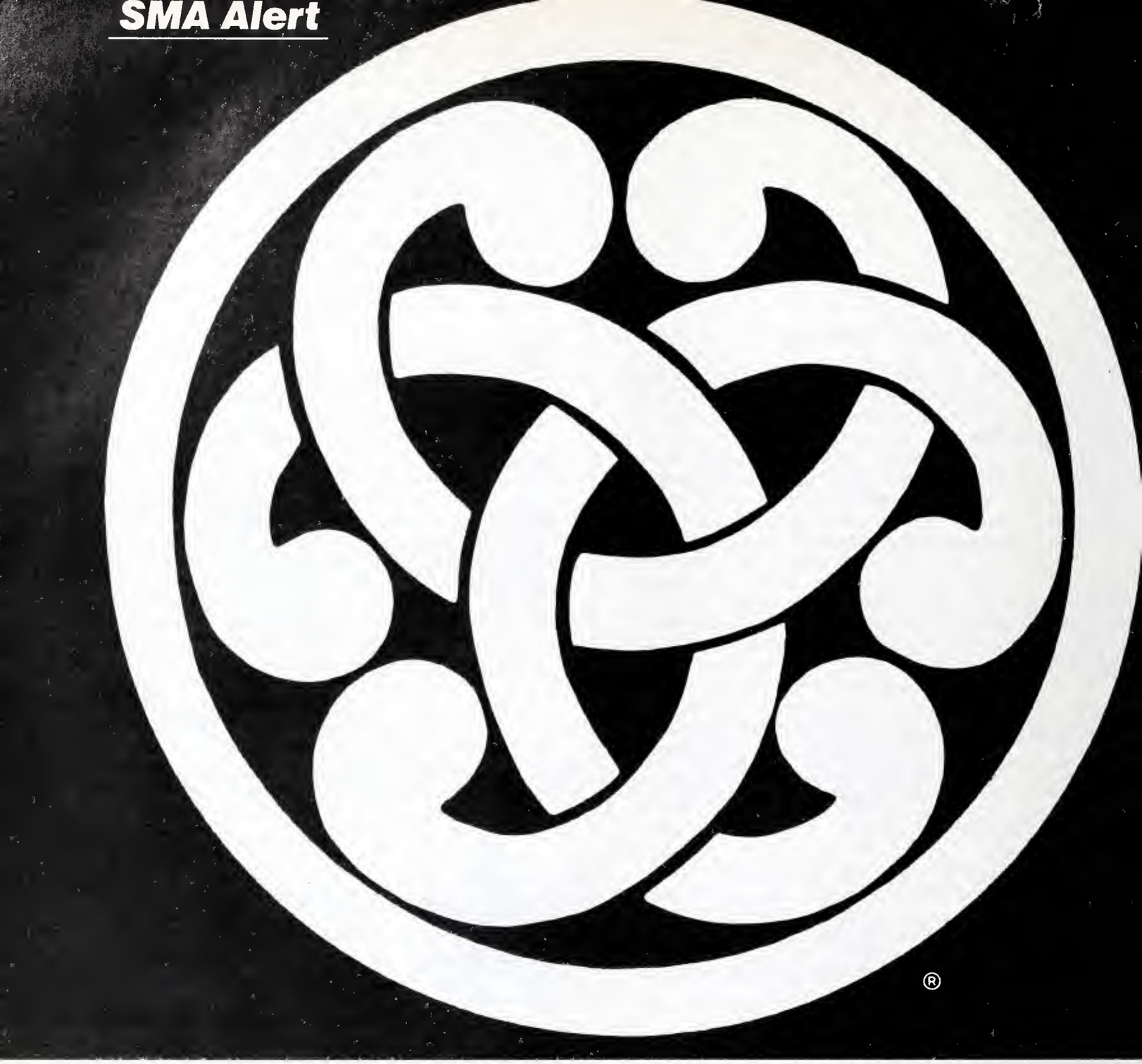
Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas



Do You Know This Vital Sign?

To professionals in medicine and pharmacy, this is the mark of a distinguished member of the healthcare community—the Certified Medical Representative.

This achievement signifies the successful completion of hundreds of hours of advanced study in anatomy, pharmacology, physiology and other scientific/medical courses.

CMR candidates learn through home study. Three times yearly, rigorous examinations are given at 50 major universities throughout the country. The completion of this comprehensive educational program is an independent, unbiased way of attaining certification. The program is accredited by the American Council on Education, and is recognized industry-wide.

The results—Certified Medical Representatives—have the vital signs of the medical professionals they serve: dedication and determination, knowledge and understanding, competence and consideration.

Write or call for a free catalog and more information today.

The Certified Medical Representatives Institute, Inc.
4316 Brambleton Avenue, S.W.,
Roanoke, Virginia 24018
703/989-4596

Know Your CMR

See us at the 1987 Annual SMA Scientific Assembly, San Antonio, Texas, Nov. 1-4, Booth #225

Techniques for improving your practice development

Many practice development activities require considerable thought before being pursued. The following ideas are easier to implement, but will produce less dramatic results:

Newsletters: About two to four times per year, some practices send out newsletters that deal with clinical topics, new equipment and improved facilities, and biographical information about new colleagues as well as employees. These are mailed to active patients and patients who haven't been in for up to two or three years. They also could be mailed to referral sources, pharmacists, and school nurses.

Patient Satisfaction Surveys: Stick to short surveys—no more than 15 items—and use only one side of one page. Hand them out yourself, with a stamped envelope addressed to you and marked "Confidential."

Improved Patient Recall System: Your best practice builder is to avoid losing your current patients. Telephoning patients for their recall visits is more reliable than recall cards or letters. Consider calling patients who have not been in for over one year, and who should be candidates for periodic preventive care.

Referral Logbook: Maintain a loose-leaf notebook with names of each referral source (physicians, pharmacists, and patients) at the head of each page. This will allow you to keep more accurate track of your best referral sources. Always send "thank you" notes to referral sources, and occasionally call those who provide you with more than a few.

Avoid Interest and Other Nuisance Charges: Charging interest or service charges on patient accounts is an irritant. Similarly, if a patient's check bounces, don't bother to collect your bank service charges from the patient—just treat it as a normal cost of doing business.

Availability: If a physician is in solo practice and traditionally takes off one day a week, he reduces his availability. To improve availability, consider taking off two half-days instead. Where there are two or more physicians, all efforts should be made to have full office coverage five or more days of the week, and possibly some extended hours as well.

Innovative Office Hours: Many patients find it difficult to visit a physician during normal 9 am to 5 pm office hours, especially for "well" visits. Some offices have been successful with early morning hours one or two days per week; others have extended their hours to 7 or 8 pm. Saturdays (half-day if not all day) are tried by approximately 20% of primary care physicians throughout the United States. Other specialists are slowly extending office hours. We also recommend that lunch hours be available for patient visits; employees and doctors could eat earlier and/or later.

Phone Accessibility: If office hours are 9 to 5, you should consider having one employee answering the phone 30 minutes to one hour earlier. Many patients wake up sick (or have been sick during the night) and want to make an appointment before they go to work. Answering services are not enough. Also, your phone should not be on answering service during your lunch hours. Employee hours should be staggered to ensure phone coverage throughout the day.

Welcome Letters, Patient Information Booklets: Some practices have successfully employed welcome letters and practice information booklets for new patients. "Welcome to our practice" letters could be sent before or after the initial patient visit. Practice information booklets would have information such as office hours, where to call in an emergency and after office hours, billing and insurance policies of the practice, map of practice location (if difficult to explain on phone).

Yellow Pages Listing: We have worked with medical practices where the practice's corporation name was listed in the phone book and yellow pages, but the individual physicians were not listed. Be sure each physician is listed. Also consider being listed in more than one phone directory; it may be worthwhile to be listed in the directories of adjoining communities, especially if some of your patients are already coming from them.

In the final analysis, the medical practices that will survive best will be practices that do not look backward to busier days, but rather make adjustments to the realities of the present and the future. This may include lowered income expectations, longer hours, and closer review of your personnel and their effect on patient service.

GEORGE S. CONOMIKES
President, Conomikes Associates, Inc, 4270 Promenade Way, Marina del Rey, CA 90292.

This article has appeared in the *LACMA Physician*, journal of the Los Angeles County Medical Society, and is reprinted with permission.

Can non-TMA members and non-physicians subscribe to TEXAS MEDICINE?
You bet! For a one-year subscription, send your name and mailing address, with $20 plus $1.45 tax, to:
Business Office
Texas Medical Association
1801 N. Lamar Blvd.
Austin, TX 78701

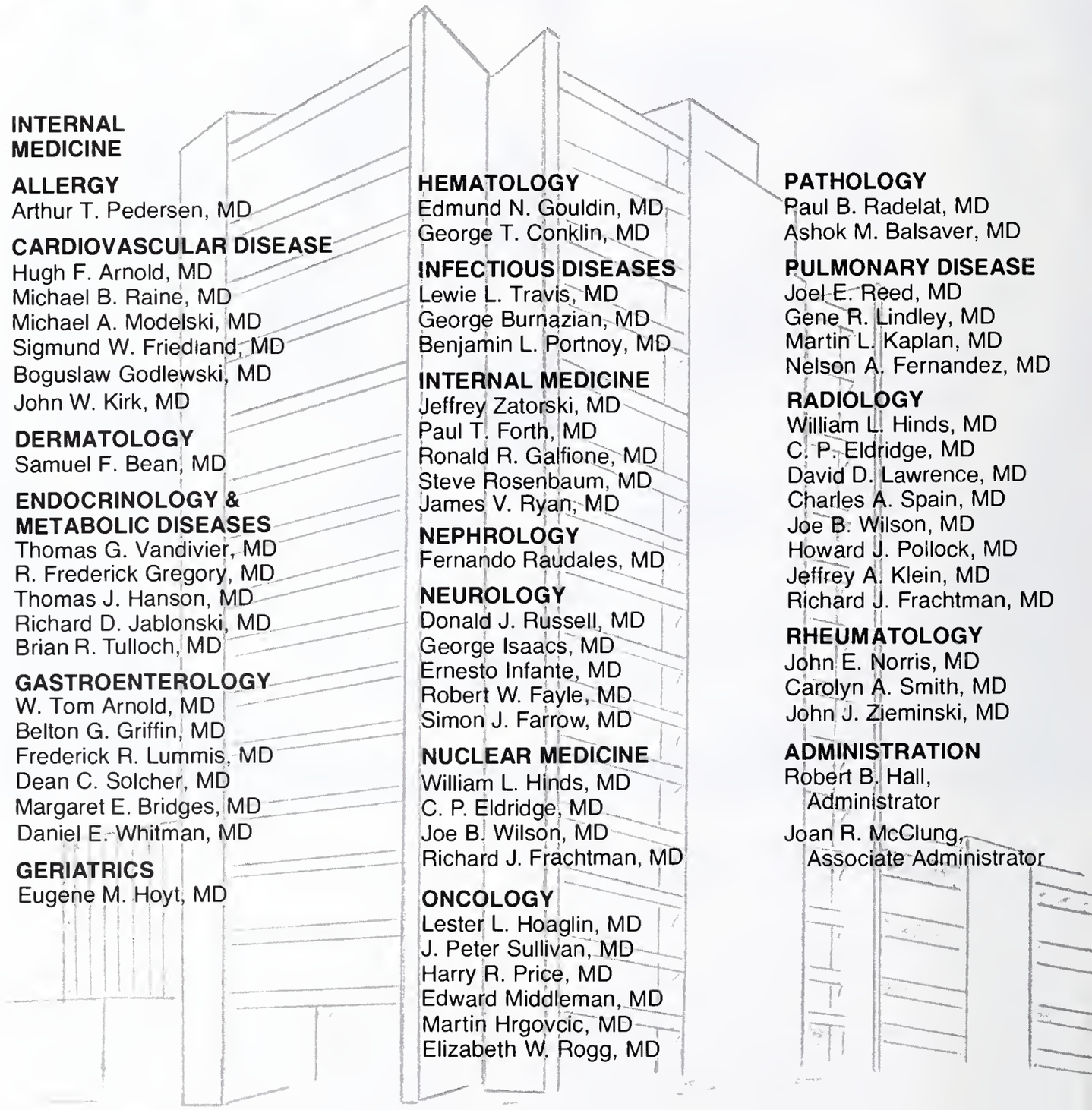
(Foreign subscriptions: $24 US)

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH



INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD
John W. Kirk, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Daniel E. Whitman, MD

GERIATRICS
Eugene M. Hoyt, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
James V. Ryan, MD

NEPHROLOGY
Fernando Raudales, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

NUCLEAR MEDICINE
William L. Hinds, MD
C. P. Eldridge, MD
Joe B. Wilson, MD
Richard J. Frachtman, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

H.M. Alston

Herbert M. Alston, MD, a Gainesville physician since 1954, died May 9, 1987. He was 68.

Dr Alston was born in Ashdown, Ark, and received his premedical education at The University of Texas at Austin. In 1943 he graduated from Baylor College of Medicine and then served an internship and residency at Parkland Memorial Hospital in Dallas. After serving in the US Army during World War II, Dr Alston continued his medical training with a residency in ophthalmology at Fort Sam Houston in San Antonio. He began a private practice in Gainesville in 1954.

Surviving Dr Alston are his wife, Velma Alston, Gainesville; sons, Steve Alston, Deer Trail, Colo, and Herbert Leo Alston, Denver; daughter, Judy Alston Budlong, Arlington, Tex; and four grandchildren.

A.C. Broders, Jr

Albert Compton Broders, Jr, MD, a Temple physician specializing in internal medicine, died May 12, 1987, at age 70. Dr Broders was founder and chief of the first gastroenterology section at Scott and White Clinic.

A native of Rochester, Minn, Dr Broders received his medical degree in 1943 from the Medical College of Virginia in Richmond. He served an internship at Wisconsin General Hospital in Madison and a fellowship in internal medicine at the Mayo Foundation in Rochester, Minn. During World War II, Dr Broders served as a medical officer in the US Navy. In 1949 he joined the staff of Scott and White Clinic in Temple.

Dr Broders is survived by his wife, Margaret (Peg) Broders, Temple; and sons, A. Compton Broders III, MD, and William M. Broders, both of Dallas, and John T. Broders and T. Addison Broders, both of Austin, Tex.

C.U. Callan

Chester U. Callan, MD, a retired Rotan, Tex, family physician, died May 18, 1987.

Dr Callan, 83, was born in Hopkins, Tex, and received a bachelor of science degree from Abilene Christian College in 1925. In 1929 he graduated from The University of Texas Medical Branch at Galveston. He moved to Rotan in 1930 after serving an internship at Scott and White Hospital in Temple, Tex. He practiced medicine for 53 years before his retirement.

Dr Callan established Callan Clinic and Hospital in 1937 and saw it grow from nine beds to a 50-bed hospital. A past president of the Texas Academy of Family Physicians, he was named Outstanding Country Doctor of the Year in the nation in 1948.

Surviving family members include his wife, Nadine Martin Callan, Rotan; sons, C.M. Callan, MD, Rotan, and Jack Callan, DVM, Abilene; daughter, Charlotte Lancaster, Winters, Tex; brother, Rush Callan, Sweetwater, Tex; 12 grandchildren; and nine great-grandchildren.

F.T.N. Hood, Jr

Francis T. Nicholas Hood, MD, a Sweetwater physician for 35 years, died May 15, 1987, at age 66.

Born in Dallas, Dr Hood was a 1941 graduate of Rice University in Houston and a 1944 graduate of Southwestern Medical School in Dallas. After an internship at Robert B. Green Memorial Hospital in San Antonio, Dr Hood served in World War II as a captain in the US Air Force. In 1947 he moved to Sweetwater, where he practiced for 35 years before moving back to his hometown of Plano in 1982.

He is survived by his wife, Patti Hood, Plano; son, Jack W. Hood, Midland, Tex; daughter, Jill Hood Sherman, Evanston, Ill; and two grandchildren.

P.C. Johnson, Jr

Philip Carl Johnson, Jr, MD, Houston, died May 24, 1987. He was 62.

A native of White Plains, NY, Dr Johnson was a graduate of the University of Michigan with a BS degree in 1948 and an MD degree in in 1949.

Dr Johnson was chief scientist of the Medical Science Division of NASA and clinical professor of medicine at Baylor College of Medicine. He was a member of the Texas Radiation Advisory Control Board from 1967 and had served as chairman of that board from 1979 until 1984. Dr Johnson was the recipient of the NASA Exceptional Scientific Achievement Medal in 1973, the Melbourne W. Boynton Award in 1980 from the American Astronautical Society, and the Hubertus Strugholb Award of the Aerospace Medical Association in 1985. During 1977–1978 he served as president of the American College of Nuclear Medicine.

Surviving family members include his wife, Virginia Snyder Johnson, Houston; sons, Philip Carl Johnson III, MD, Houston, and Christopher Charles Johnson, MD, Seattle; sister, Mrs Marian Abrams, New Windsor, NY; brother, Carl Walter Johnson, Naples, Fla; and two grandchildren.

D.L. Kendrick

Daniel Lee Kendrick, MD, a San Antonio ophthalmologist, died May 27, 1987.

Dr Kendrick, 57, was born in Richmond, Va. He was a 1956 graduate of the Medical College of Virginia in Richmond. After an internship at William Beaumont Army Hospital in El Paso, Dr Kendrick returned to the Medical College of Virginia for a residency in ophthalmology. A member of the US Army Medical Corps, he served in Japan and at Fort Belvoir, Va, before moving to San Antonio in 1965.

Surviving family members include his wife, Joyce O. Kendrick, San Antonio; daughter, Patricia K. Felker, Aurora, Colo; sons, Daniel LeRoy Kendrick and Ralph Mason Kendrick, both of San Antonio; mother, Lucile T. Kendrick, Richmond, Va; and sister, Mary K. Brown, Oklahoma City, Okla.

H.L. Kincaid

Harvey L. Kincaid, MD, a retired Houston obstetrician/gynecologist, died May 11, 1987. He was 86.

Dr Kincaid was born in Ottumwa, Iowa, and attended the State University of Iowa, where he received his medical degree in 1925. After an internship and residency in Chicago, Dr Kincaid moved to Houston in 1928. He was an associate clinical professor of obstetrics at Baylor College of Medicine.

Surviving family members include his wife, Ethel Kincaid, Sugar Land, Tex; daughter, Bennie Lee Ritz, Raleigh, NC; son, Harvey Lee Kincaid, Tampa, Fla; stepchildren, Patricia Roos and

Sue Rachuig, both of Houston; L. John Roos and David Roos, both of South Bend, Ind; LaVeta Clovis, Washington, DC; and Stephen Roos, Schulenberg, Tex; sister, Thelma Erhardt, Ottumwa, Iowa; 15 grandchildren; and one great-grandchild.

J.N. Lionti

Joseph N. Lionti, MD, a Texas City urologist, died May 14, 1987. He was 66.

Dr Lionti was born in Burlington, Vt. He attended the University of Vermont, receiving a bachelor of arts degree in 1942 and his medical degree in 1945. Dr Lionti joined the US Army in 1946 and served at Brooke General Hospital in San Antonio and at Gorgas Hospital, Ancon Canal Zone. Following military service, he began a private practice in Texas City.

Dr Lionti is survived by his wife, Ruth Lionti, Texas City; daughters, Dean Cockrill, Victoria, Tex, and Karen Wilkenfeld and Abby Lionti, both of Houston; mother, Mrs Angelo C. Lionti, Hartford, Conn; brother, Rosario Lionti, Denver; sisters, Connie Paquette, Ottawa, Ontario; Vince Buzzell, Proctor, Tex; and Dorothy Turmel, Hartford, Conn; and two grandsons.

W.E. Lockhart

W.E. Lockhart, Jr, MD, 78, an Alpine general practitioner, died May 29, 1987.

Dr Lockhart was born in Robert Lee, Tex, and was reared in Canyon, Tex. In 1934 he graduated from The University of Texas Medical Branch at Galveston. He served internships at Cleveland City Hospital (1934–1935) and at the University of Minnesota (1935–1936). In 1936 Dr Lockhart moved to Alpine, Tex, where he began his career as physician and instructor of health at Sul Ross State College (now State University). During World War II, he volunteered for service in the Army Medical Corps with the 30th Evacuation Hospital in the South Pacific. He was discharged as a major in 1945. Returning from war, Dr Lockhart built the Lockhart Clinic-Hospital in 1946, which functioned as an accredited hospital until 1949, and thereafter as his private clinic. He led the drive to establish Brewster County Memorial Hospital, which opened in 1957.

Dr Lockhart was a charter fellow and lifetime member of the American Academy of Family Physicians.

Surviving family members include his wife, Lora Bell Lockhart, Alpine; daughters, Joyce Fay Lockhart Wildenthal, East Lansing, Mich; Lolly Lockhart Beaird, Pflugerville, Tex; and Mary Bell Lockhart, Austin; son, William E. Lockhart III, Livingston, Tex; sister, Fay Lockhart Mays, Austin; brother, Vincent McCutcheon Lockhart, El Paso; six grandchildren; and one great-grandson.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

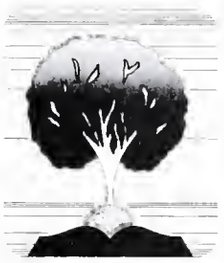
H. M. ALSTON
Gainesville, 1918–1987

A. C. BRODERS, JR
Temple, 1916–1987

C. U. CALLAN
Rotan, 1904–1987

F. T. N. HOOD, JR
Sweetwater, 1920–1987

P. C. JOHNSON, JR
Houston, 1924–1987



D. L. KENDRICK
San Antonio, 1930–1987

H. L. KINCAID
Houston, 1900–1987

J. N. LIONTI
Texas City, 1920–1987

W. E. LOCKHART
Alpine, 1908–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audiovisual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student $ 5.00 ☐ Patron $ 100.00
☐ Sustaining $15.00 ☐ Life $1,000.00
☐ Subscribing $25.00

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

Crisis in black and white.

Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Libray. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Betcher RW: *A Student-to-Student Guide to Medical School. Study Strategies, Mnemonics, Personal Growth.* Boston, Little, Brown and Company, 1985.

Cheng TO (ed): *The International Textbook of Cardiology.* New York, Pergamon Press, 1986.

Cohen S (ed): *The Diagnosis and Treatment of Drug and Alcohol Abuse.* New York, The Haworth Press, 1986.

Davis JH, Drucker WR, Foster RS Jr, et al: *Clinical Surgery* (2 vols). St Louis, The C.V. Mosby Company, 1987.

DeKernion JB, Paulson DF: *Genitourinary Cancer Management.* Philadelphia, Lea & Febiger, 1987.

du Vivier A: *Atlas of Clinical Dermatology.* Philadelphia, W.B. Saunders Company, 1986.

Friedman AC (ed): *Radiology of the Liver, Biliary Tract, Pancreas and Spleen.* Baltimore, Williams & Wilkins, 1987.

Glenner GG, Wurtman RJ (eds): *Advancing Frontiers in Alzheimer's Disease Research.* Austin, University of Texas Press, 1987.

Hamer J (ed): *Drugs for Heart Disease,* ed 2. London, Chapman and Hall Ltd, 1987.

Hansmann M, Hackelöer BJ, Staudach A: *Ultrasound Diagnosis in Obstetrics and Gynecology.* New York, Springer-Verlag, 1985.

The Health Consequences of Using Smokeless Tobacco. A Report of the Advisory Committee to the Surgeon General, 1986. Bethesda, Md, US Department of Health and Human Services, 1986.

International Auschwitz Committee: *Nazi Medicine. Doctors, Victims and Medicine in Auschwitz.* New York, Howard Fertig, 1986.

Jellinger K (ed): *Therapy of Malignant Brain Tumors.* New York, Springer-Verlag, 1987.

Kunin CM: *Detection, Prevention and Management of Urinary Tract Infections.* Philadelphia, Lea & Febiger, 1987.

Langer A, Iffy L (eds): *Extrauterine Pregnancy.* Littleton, Mass, PSG Publishing Company, Inc, 1986.

Mazzaferri EL (ed): *Endocrinology,* ed 3. New York, Medical Examination Publishing Company, 1985.

McLatchie GR (ed): *Essentials of Sports Medicine.* New York, Churchill Livingstone, 1986.

Muir IFK, Barclay TL, Settle JAD: *Burns and Their Treatment,* ed 3. Boston, Butterworths, 1987.

O'Connor DT: *Endometriosis.* New York, Churchill Livingstone, 1987.

Queenan JT, Hobbins JC (eds): *Protocols for High-Risk Pregnancies,* ed 2. Oradell, NJ, Medical Economics Books, 1987.

Roberts AJ, Conti CR: *Current Surgery of the Heart.* Philadelphia, J.B. Lippincott Company, 1987.

Romeo FF: *Understanding Anorexia Nervosa.* Springfield, Ill, Charles C Thomas, 1986.

Rosenberg SA: *Surgical Treatment of Metastatic Cancer.* Philadelphia, J.B. Lippincott Company, 1987.

Rosof AB, Felch WC (eds): *Continuing Medical Education. A Primer.* New York, Praeger Publishers, 1986.

Schiff L, Schiff ER (eds): *Diseases of the Liver,* ed 6. Philadelphia, J.B. Lippincott Company, 1987.

Seifert G, Miehlke A, Haubrich J, et al: *Diseases of the Salivary Glands. Pathology-Diagnosis-Treatment-Facial Nerve Surgery.* New York, Thieme Inc, 1986.

Shelley WB, Shelley ED: *Advanced Dermatologic Therapy.* Philadelphia, W.B. Saunders Company, 1987.

Simmons JE: *Psychiatric Examination of Children.* Philadelphia, Lea & Febiger, 1987.

Sternberg RJ, Davidson JE (eds): *Conceptions of Giftedness.* New York, Cambridge University Press, 1986.

Strömbeck JO, Rosato FE (eds): *Surgery of the Breast. Diagnosis and Treatment of Breast Diseases.* New York, Thieme Inc, 1986.

Sutton D (ed): *A Textbook of Radiology and Imaging* (2 vols). New York, Churchill Livingstone, 1987.

Trumbold C (ed): *Anorectal, Presacral and Sacral Tumors.* Philadelphia, W.B. Saunders Company, 1987.

AIM HIGH

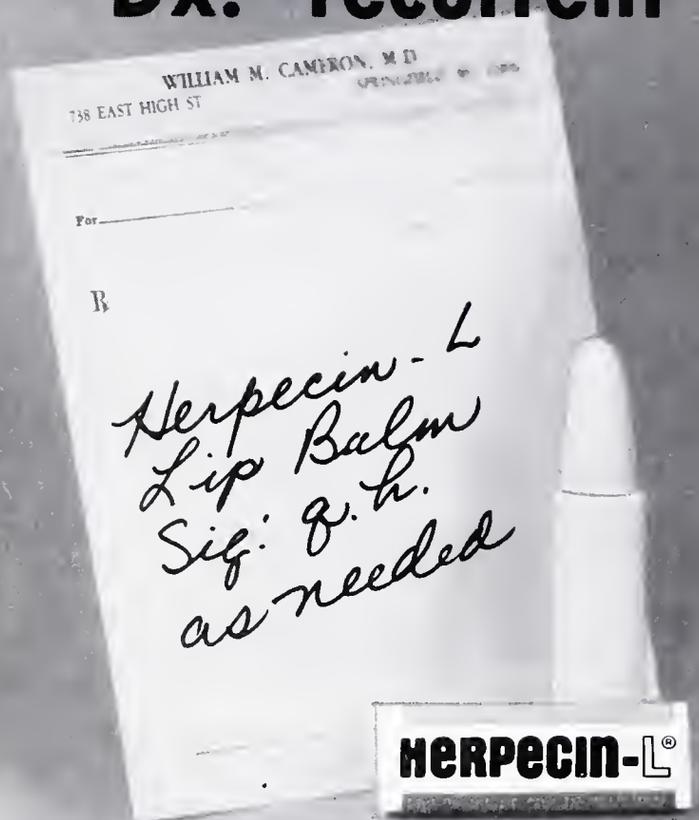
PHYSICIAN SPECIALISTS.

The Air Force can make you an attractive offer—outstanding compensation, better working hours plus opportunities for professional development. You can have a challenging practice and time to spend with your family. Find out what the Air Force offers a specialist up to age 58. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 784-3132 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 7702S; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2SS0 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 BBB-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
Suite 407, West Houston Doctors Center, 12121 Richmond Avenue, Houston 770B2; 713 496-1006

THE UNIVERSITY CENTER FOR PAIN MEDICINE AT HERMANN
Hermann Hospital, 6411 Fannin, Houston, Texas 77030
713 797-2732

A multidisciplinary center which offers comprehensive treatment options for acute, subacute, and chronic pain patients. The center's total management of each patient's pain recognizes both the central and peripheral components of the syndrome.

PRITHVI RAJ, MD, FACA, FFARCS
Orthopaedist
Diplomate American Board of Anesthesiology

SHELLY LISS, MD
American Board of Physical Medicine and Rehabilitation

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
B17 33B-4501 (24 hours)

DAVID S. PITA, MD
COLON & RECTAL SURGEON
OUT-PATIENT LASER HEMORRHOIDECTOMY

Bowel obstruction from cancer of the colon, volvulus, Crohn's or ulcerative colitis, toxic megacolon, diverticular obstruction, acute or chronic colon bleeding, colovesicle fistula, rectovaginal fistula, rectal fistulas, rectal prolapse, anal incontinence, warts, pruritus ani, rectal abscesses, hemorrhoids and other rectal conditions.

Emergency consultations and referrals; weekends and evenings.

Privileged at Baylor University Medical Center and Methodist Central Hospital.

214 B21-4300, answered 24 hours and weekends
214 341-0B59, residence

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building B,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism

Practice Limited to Endocrinology & Diabetes

5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

TMA Physician Placement Service

. . . Another service of your association

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery

DAVID J. ZEHR, MD—Microsurgery

ARNOLD V. DiBELLA, MD

Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA

Diplomates American Board of Orthopaedic Surgery

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

TMA Practice Management Workshops

. . . Another service of your association

ROBERT A. ERSEK, MD

Diplomate of American 8oard of Plastic Surgery

Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone B17 B77-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS

Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation

8aylor Medical Plaza, 3B00 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite B116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA

Neal R. Reisman, MD, FACS

Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 770B2; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

HAND, MICROVASCULAR AND REPLANTATION SERVICE

Treatment of traumatic and non-traumatic injuries of the hand and wrist, soft tissue problems of the upper extremity and reconstructive hand surgery.

David H. Hildreth, MD
Diplomate American Board of Orthopaedic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Orthopaedic Surgery
The University of Texas Medical School at Houston; 713 792-5994

Dennis P. Maher, MD
Diplomate American Board of Plastic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Plastic and Reconstructive Surgery
The University of Texas Medical School at Houston; 713 792-5473

For more information call 1-B00-392-LIFE
6431 Fannin Street, Houston, Texas 77030

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON NEUROSURGERY ASSOCIATION

Neurological Surgery and Microneurosurgery

R. Gordon Long, MD, FACS
8ennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Dinlomates American Board of Neurological Surgery
8aylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD

920 South Lake, Fort Worth, Texas 76104
Telephone B17 336-0551

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American Board of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

TMA HealthWise Series

. . . Another service of your association

DALLAS NEUROSURGICAL ASSOCIATION

Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
Casey E. Patterson, MD (Retired)
W. Robert Hudgins, MD
Richard H. Jackson, MD

St. Paul Professional Bldg., 5959 Harry Hines Blvd., Suite 620, Dallas, Texas 75235; 214 637-0420

Presbyterian Professional Bldg., 8210 Walnut Hill Lane, Suite 905; Dallas, Texas 75231; 214 369-7596

ARLINGTON ASSOCIATION OF NEUROLOGICAL SURGEONS

Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; B17 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES

900 South Loop West, #100
Houston, Texas 77054

Electroencephalography

EEG service via telephone transmission to hospitals, clinics and private offices.

Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology. Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

OCCUPATIONAL MEDICINE

ERIC G. COMSTOCK, MD

Diplomate, American Board of Medical Toxicology

Occupational and Environmental Toxicology

6910 Bellaire 8lvd., Suite #12, Houston, Texas 77074
Phone 713 541-3214

TMA Practice Enhancement Programs

. . . Another service of your association

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES

Albert Vaiser, MD
William 8. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
8radley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or 800 872-2020
3600 Gaston Avenue, Dallas, Texas 7S246; 214 821-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 75204
214 521-11S3; 1-800-442-S376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 7820S; 512 226-S191

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. 8aum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-714S

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-57S7

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 91S 54S-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 8inz, Suite 400, Houston, Texas 77004;
1-800-833-S921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. 8loome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey 8. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS
Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD
John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 28SS Gramercy, Houston, Texas
77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas
770S7; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

Heights Medical Eye Center, 53S West 20th Street, Houston, Texas 77008;
713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Schubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 7S204; 214 S21-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 33S-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery
1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 79S-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

TMA Annual Session, May 12-15, 1988, San Antonio . . . Another service of your association

TMA Physicians Benevolent Fund . . . Another service of your association

ORTHOPEDIC ASSOCIATES OF DALLAS

John 8. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. 8rodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA

ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. 8lumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American 8oard of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

SAN ANTONIO HEAD & NECK SURGICAL ASSOCIATES, PA

8oard Certified Otolaryngologists

Julius F. Marlowe, MD
Michael H. 8ertino, MD
G. Paul Laursen, DD5, MD, FACS, FAAFPRS
Harry Schilling, MD
Stephen J. Talley, MD

ENT, Facial Plastic Surgery, Lipo-Suction

Madison Square Medical 8uilding, Suite 304, 311 Camden, San Antonio, Texas 78215; 512 224-5481

Physicians' Plaza, Suite 370, 8038 Wurzbach Road, San Antonio, Texas 78229; 512 690-1326

PATHOLOGY

FORT WORTH MEDICAL LABORATORIES

Dorothy Patras, MD

Anatomic Pathology and Consultation in Clinical Pathology

1400 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. 8ox 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.

J. S. Wilkenfeld, MD
Diplomate of the American 8oard of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. 8ox 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

TMA Physician Health & Rehabilitation
Hotline 512/477-5575

. . . Another service of your association

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. 8ox 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. 8rowne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American 8oard of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. 8rauer, MD, FACS
Thomas M. 8iggs, MD, FACS
Laurence E. Wolf, MD, FACS
8enjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James 8. Stafford, IV, MD, FACS
David A. Lee, MD
John E. Lomax, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American 8oard of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. 8ox 2476, Fort Worth, Texas 76113; 817 336-0446

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Larry E. Reaves, MD
Diplomate American 8oard of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza 8uilding
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

WILLIAM E. BARNES, MD

Diplomate American 8oard of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA

Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN
Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery

Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

BURN CARE ASSOCIATES
The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD
Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS
Excellence in Form & Function
Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 558-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

SAEED BEG, MD, PA
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive Surgery, Hand Surgery

2602 Texas Drive, Irving, Texas 75062
Phone 214 258-0025

PSYCHIATRY

RICHARD G. JAECKLE, MD
Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

Representing TMA's legislative views
. . . Another service of your association

TIMBERLAWN PSYCHIATRIC HOSPITAL
Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 381-7181

GONZALO A. AILLON, MD
Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

DALLAS PSYCHIATRIC ASSOCIATES
A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, L8J at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

C. MARSHALL BRADSHAW, MD, PA
Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

TMA Physician Membership Directory
. . . Another service of your association

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
B17 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIOLOGY

THERAPEUTIC RADIOLOGY AT MEMORIAL HOSPITAL

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-S622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
410S Live Oak St.
Dallas, Texas 75204; 214 B23-41S1

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS

Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; B17 332-787B

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 B27-3890
Hours By Appointment

TMA Action monthly newsletter

. . . Another service of your association

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
B17 336-S711

EUGENE R. TODD, MD, PA

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 7S5, Dallas, Texas 7S246
214 B26-3S00

DALLAS UROLOGY ASSOCIATES

David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-776S Answered 24 Hours

KIRBY B. TARRY, MD, FACS

Diplomate, American Board of Urology

Adult and Pediatric Urology

Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES

Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology

221 W. Colorado, #440, Dallas, Texas 7520B; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

C. F. SKRIPKA, JR, MD, FACS

Urology, Andrology & Neurourology

1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Psychiatrist—The Laredo State Center has an opening for a full-time phychiatrist. Valid Texas license. Board certified or eligible. Coordinates and supervises all medical and psychiatric treatment services. If interested, contact the Laredo State Center, 512 723-2926, P.O. Box 1835, Laredo, Texas 78044-1835. EOE.

Staff Psychiatrist—Opening for staff psychiatrist in largely geropsychiatric, JCAH and Medicare accredited hospital. Salary up to $72,304 for board certified psychiatrist and up to $65,100 for board eligible psychiatrist. Patient census 430 to 450. Nineteen member medical staff includes nine psychiatrists and three neurologists. Excellent location in the Texas Hill Country, one hour from San Antonio. Good fringe benefits. Must have Texas license. Call or write G. W. Harrelson, Jr., MD, Clinical Director, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78029-1468; 512 896-2211. An EEO/AAP employer.

Cardiologist, group practice, 60 physician acute care, 140-bed Air Force Hospital with family residency program. Referrals from over 25,000 medical/surgical outpatient visits per month. All malpractice insurance paid. May be eligible for bonus pay and moving expenses. Practice in a brand new medical complex at Carswell AFB in Fort Worth, Texas. Minimum salary $55,255. Contact 817 735-7865.

Physician—$56,856 plus up to $3,000 additional compensation subject to approval. Group health insurance plus all state benefits including retirement. Must be licensed in Texas as MD or DO. Contact Mexia State School, P.O. Box 1132, Mexia, Texas 76667. Phone 817 562-2821. An equal opportunity/affirmative action employer and does not discriminate against the handicapped.

Physician with Texas license needed to practice general medicine at Student Health Center. Forty hour week, Monday-Friday. Minimal call duty. Fringe benefits. Contact Sheila Meyer, Administrator, North Texas State University Health Center, P.O. Box 5158, Denton, Texas 76203. 817 565-2331. Equal opportunity/affirmative action employer.

Radiologist needed—recruiting for board certified/board eligible radiologist. Proficiency in interventional skills required. Faculty appointment possible for qualified candidate. English fluency required. Excellent benefit package. Contact: Chief, Radiology Service, Olin E. Teague Veterans' Center, 1901 First Street, Temple, Texas 76501, call 817 778-4811, ext. 4175. Equal opportunity employer.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas: Full time ED positions available in the greater Houston area with local group. Please send CV to STAT Physicians, P.O. Box 79348, Houston, Texas 77279-9348; or call 713 468-7810.

Texas—Full-time ED positions available in North Texas area. Small group, flexible scheduling. ACLS and US education required. Send CV to Ms. Neu, Numed Systems, P.O. Box 2122, Denton, Texas 76202.

MediClinic Houston is now offering immediate openings for full-time positions for career minded physicians. Part-time and weekend coverage also available in all five clinic locations. Excellent remuneration and paid malpractice insurance. Please send CV to MediClinic, 6604 Southwest Freeway, Houston, Texas 77074 or call M. A. Fazlani, MD, 713 468-7991.

Texas, Weatherford: Excellent opportunity for physician seeking career in emergency medicine. Moderate volume facility approximately 45 minutes west of Fort Worth. If interested contact: Lori Jordan, Coastal Emergency Services, Inc., 1425 Greenway Dr., Suite 450, Irving, Texas 75038 or call collect 214 258-5038.

Texas, Abilene: Regional trauma center needs additional full-time emergency physicians. City of 100,000 within a 17-county referral area. Two universities and one college. Several area lakes. $90,000+/year. Contact: Helen Meyer, 2702 McCullough, Suite 3, San Antonio, Texas 78212; 512 732-5000.

Texas, College Station: Immediate full-time positions available at a brand new facility. Home to Texas A&M University. Surrounded by national forests, state parks and lakes. Midsize town with good schools near major metropolitan areas. $89,000+/year with paid malpractice insurance. Contact: Helen Meyer, 2702 McCullough, Suite 3, San Antonio, Texas 78212; 512 732-5000.

Texas, San Antonio: Full-time at a suburban hospital. Charming small town atmosphere in a large city. Numerous colleges and universities. Wide variety of cultural events. Minutes away from hunting, fishing, and boating. $92,000/year. Contact: Helen Meyer, 2702 McCullough, Suite 3, San Antonio, Texas 78212; 512 732-5000.

Good Move! We are now placing permanent and part-time physicians for minor emergency clinics in excellent locations all over Texas. Please send your complete resume or CV to Good Move!, P.O. Box 2675, Bryan, Texas 77805. All replies will remain confidential.

National Emergency Services, Inc. offers lucrative "moonlighting" opportunities in emergency medicine. Presently seeking physicians interested in working nights and weekends, 1½-2 hours northwest of Houston, Texas. Guaranteed hourly rate, full malpractice coverage and flexible scheduling are provided. All moderate to low volume hospitals. Interested physicians please contact Jane Reid, 1-800-645-4848.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Family practice physician for 10-member multi-specialty group located in the Rio Grande Valley. Clinic has six family practice physicians. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Family practice physician (BC/BE) to associate with established FP in clinic in small, scenic Hill Country town near San Antonio. Primarily ambulatory/emergency practice with some surgery. Salary plus incentive. Partnership possible. J. E. McCoy, MD, 120 Medical Drive, Boerne, Texas 78006; 512 249-9307.

Raise your family in a friendly small town with the convenience of a large city just 30 miles away. Excellent schools. New hospital and new clinic needs a family practice physician interested in practicing medicine in West Texas. Contact Charles Butts, Administrator, Crane Memorial Hospital, 1310 S. Alford, Crane, Texas 79731; 915 558-3555.

Houston suburban. Busy FP needs help with large, growing practice. Please send CV to W. Sanford Smith, Professional Practice Management, Inc., 900 Rockmead, Kingwood, Texas 77339; 713 358-8113.

Progressive rural community in northwestern Texas Panhandle looking for family practice physician. Lucrative future, fee-for-service practice with financial guarantees, plus benefit package. Three doctor group, fully staffed clinic, 30-bed hospital, 60-bed nursing home, strong Ag/Industrial area. Quality lifestyle, excellent school system, active churches. Contact Robert Neelley, President, Doctor Search Committee, P.O. Box 549, Friona, Texas 79035; 806 247-2706.

Communities throughout Texas and other states are available now and in 1988 for general practice and family practice doctors (both solo and groups). The Lewis Group, 1227 N. Valley Mills, Suite 200, Waco, Texas 76710; 817 776-4121.

Dallas Vicinity—Immediate need for recently-trained, BC FP to associate with small FP group. Shared call. OB preferred. Modern, 150-bed hospital. Very lucrative practice potential; generous incentive package; early partnership. Excellent lifestyle in family-oriented community; excellent economy. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

San Antonio Vicinity—Seeking board certified FP desiring full range of family medicine, including OB. Modern hospital, new office space adjacent to hospital. No evening or weekend ER call required. Share call with young, BC FP. Excellent incentive package. Hunting mecca. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"
locum tenens & permanent placements

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

Small FP group seeks associate for July 1988. OB preferred, shared call. Progressive Central Texas community of 5,600 within one hour of Austin. Award winning schools. Modern hospital. Competitive incentive package; early partnership. Excellent lifestyle in family-oriented community; healthy economy. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Family physician needed to work for another physician in Bryan, Texas to provide comprehensive medical services for members of the family on a continuing basis including internal medicine, pediatrics, obstetrics-gynecology and geriatrics. Examine patients; elicit and record information about patients' health, order or execute various tests and x-ray on patients' conditions. Analyze, report and diagnose condition; administer treatment and medication. Vaccinate patients to immunize them from communicative disease. Refer patients to specialists

when necessary. Must have one year's surgeon training. Salary $50,000. per year, 40 hours per week. Apply at the Texas Employment Commission Building, TEC Building, Austin, Texas 78778, J.O. #4793447. Ad paid for by an equal employment opportunity employer.

Rural Colorado—BC/BE family practitioner to join three FPs in growing multispecialty group. Excellent opportunity for person interested in rural living, mountain recreation, health care delivery for medically underserved populations. Send CV to Michael Bloom, 204 Carson Avenue, Alamosa, Colorado 81101; 303 589-5161.

Internal Medicine

Immediate opportunity for primary care physician in rural community in Central Oregon, 30 miles from Bend, Oregon. For further information contact Betty Roppe, Manager, Prineville Medical Clinic, 260 West 4th, Prineville, Oregon 97754; phone 503 447-6263.

Progressive Central Texas community of 5,600 (within one hour of Austin) seeks BE/BC general internist. Modern hospital; competitive incentive package including income guarantee, professional office space, etc. Award winning schools. Excellent lifestyle in family-oriented community; good economy. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

BE/BC general internist for associate practice in Panhandle community of 25,000 (service area population). Modern hospital. Competitive incentive package. Many area amenities and recreational activities. Easy access to Amarillo and airport. For information, without cost or obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

OBG physician for 10-member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Progressive Central Texas community, within one hour of Austin, seeks BE/BC obstetrician/gynecologist. Award winning schools. Modern hospital. Competitive incentive package. Call coverage provided. Excellent lifestyle in family-oriented community. For information, without cost or obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Fort Worth Vicinity—Immediate need for BE/BC OBG. Attractive, affluent community; strong economy. Recreational mecca. Modern hospital. Share call with young, American-trained, BC OBG. Competitive incentive package. Easy access to D/FW. For information, without cost or obligation, contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Orthopedics

Wanted—Board qualified orthopedic surgeon with training in hand surgery to work in orthopedic group in West Texas city. Ultimate full partnership planned. Medical school affiliation possible. 806 799-1380.

Orthopedic Surgeon—Immediate need for BE/BC physician to serve two adjacent Central Texas communities. Call coverage avaliable. Modern hospital equipment and facilities. Competitive incentive package, including income guarantee, office space, etc. Progressive communities. Good economy. Great schools. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Pediatrics

Pediatrician with training/experience in developmental/behavioral pediatrics to serve as associate clinical director of large, established, outpatient, JCAH accredited community center serving developmentally and emotionally disabled children, birth to 15 years of age. Multidisciplinary staff of 50 professionals includes four pediatricians and 12 other specialty areas on staff and consultants in 10 additional areas. Center is well funded and has excellent facilities. Excellent salary and benefits. Contact Stephen G. Maddox, MD, Clinical Director, Child Study Center, 1300 West Lancaster, Fort Worth, Texas 76102; 817 336-8611.

Pediatrician, Brownsville, Texas—Vacation area near the ocean and Mexico. Enjoy practice in a modern, spacious, custom built clinic with lab, x-ray. Pleasant hours, good beginning salary. Contact Adele Bromiley, MD, 2335 Central Blvd., Brownsville, Texas 78520; 512 546-3126.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Position for board certified/eligible radiologist with experience in US, CT, nuclear medicine, mammography, angiography and interventional radiology. Join group serving clinic and two community hospitals in Central Texas. Salary leading to partnership. Reply to 2027 S. 61st, Suite 116, Temple, Texas 76501; 817 774-9994.

South Texas Diagnostic BC Radiologist Needed—158 bed hospital, outpatient clinic. CT, mammo, US, NM, DSA, interventional and general radiology (MRI possible in near future). Early equal benefits for right person. Send CV to P.O. Box 5567, Brownsville, Texas 78520.

Opening for radiologist with experience in angio, CT, US, nuclear medicine and interventional techniques to join group of six radiologists in private office and two medical centers with a total of 406 beds, personnel in radiology departments, 32. Magnetic resonance experience helpful. Respond to Ad-673, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Radiologists are needed for a variety of positions in Texas as well as other states. Opportunities exist in the areas of locum tenens, practice trials and permanent placement. For more information call toll free 1-800-531-1122 or write Kenneth W. Teufel, MD, PRN, Ltd., One Thousand North Walnut, Suite A, New Braunfels, Texas 78130.

Diagnostic Radiologist—Immediate need for recently trained, BC physician to associate with established radiology group serving regional medical center. All modalities, including MRI and interventional radiology. Family-oriented community; strong economy. Easy access to D/FW. Excellent incentive package; early partnership. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Other Opportunities

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Joyce Staffel, Medical Division, JSI, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-0475.

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, Gonzaba Medical Group, 720 Pleasanton Road, San Antonio, Texas 78214.

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or BE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 78539; 512 383-1481.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include OBG, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-8080; or send CV to Mitchell & Associates, Inc., P.O. Box 1804, Scottsdale, Arizona 85252.

Cardiologist, BE, BC—Excellent opportunity with outstanding potential. Modern progressive hospital in an ideal southern family community. Write AD-663, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Full and part-time experienced physicians for established and expanding family care clinic in Northwest Houston. Excellent remuneration and working conditions; flexible scheduling. Contact Director, Medical Center, 7925 FM 1960 West, Houston, Texas 77070; 713 469-4560.

Expanding 20-physician multispecialty group has excellent opportunity for the following specialists: family practitioner, pediatrician, OBG, orthopaedic surgeon, and dermatologist. High beginning guaranteed salary in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Administrator, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720.

Primary care physicians to staff freestanding, urgent care centers in West Texas. Base salary $60,000, plus percent incentives. Benefits include malpractice and health insurance. Partnership opportunity after first year. Forty hour work week with flexible scheduling. CV with reference to Ted Zegarra, MD, Response Medical Associates, 5774 North Mesa, El Paso, Texas 79912.

Desirable Texas opportunities available for BC/BE physicians: Neurosurgeon, OBG, orthopedic surgeon, and urologist. Excellent financial packages available. Affiliated with modern 250-bed hospital in 60,000+ coastal community. Send CV to Mike Jenkins, RH Medical Group, Inc., 12651 Briar Forest, Suite 180, Houston, Texas 77077; or call 713 496-7777.

Expanding Texas Multispecialty Group—Dallas/Fort Worth, requires BE/BC physicians: Internal medicine, OBG, family practice, orthopedic surgery, anesthesiology, general surgery, pediatrics, radiology, urology, dermatology, psychiatry. Competitive salary. Extensive benefits. Direct inquiry, CV to: Medical Director, Permanente Medical Association of Texas, 12720 Hillcrest, Suite 600, Dallas, Texas 75230.

Solo otolaryngologist—unopposed—retiring for health reasons. Twenty-eight miles east of Dallas. Large draw, varied patient load. AMI affiliated with guarantee. Sell practice at whatever suits you. Turn key or "?". Multispecialty within complex. Many amenities. Call direct 214 563-3323 or write for detailed prospectus to J. M. Anthony, MD, 1553 Hwy. 34 South, Suite 800, Terrell, Texas 75160.

Great Texas Opportunities—Substantial income guarantees, free office space, MP insurance paid. Large cities, suburbs, large-small towns. FPs, OBGs, PDs, IMs, NSs, GPs. Call or send CV to Nancy McEntire, CPC or Ray Carter, McEntire Carter Associates, 9500 Jollyville Road, #142, Austin, Texas 78759; 512 345-7327.

Rapidly growing Austin, Texas-based pharmaceutical research firm is seeking an MD as Associate Medical Director to oversee patient care in research facility. Specific responsibilities include: performing physical examinations, supervising dosing of investigational drugs, providing on-call consultation for studies, serving as principal investigator and/or medical supervisor for Phases I-IV clinical investigational studies. Please submit curriculum vitae in strict confidence to: Rick Hawkins, President, Pharmaco, Two Park Place, 4009 Banister Lane, Austin, Texas 78704.

South Texas—Immediate opening for board certified anesthesiologist in 180-bed hospital with an all-MD anesthesia service. Please send CV to Administrator, P.O. Box 1110, Weslaco, Texas 78596.

Orthopedic doctors, neurologists, and neurosurgeons are needed for multispecialty groups in 1987 and 1988 for Texas and other states. You owe it to your future to find out what is available. The Lewis Group, 1227 N. Valley Mills, Suite 200, Waco, Texas 76710; 817 776-4121.

Excellent Texas opportunities—ENT, family practitioner, general practitioner, general surgeon, internal medicine, OBG, ophthalmologist, orthopedic surgeon, oncologist, pediatrician, to practice in one of several lake area communities, in the beautiful Piney Woods area of East Texas. Excellent quality of life, first year guarantee, etc. Other Texas opportunities available also. Reply with CV to Medical Support Services, Armando L. Frezza, 8806 Balcones Club Dr., Austin, Texas 78750; 512 331-4164.

Otolaryngologist—Immediate opportunity for 8E/8C physician in Northeast Texas community of 27,000 (service area pop. 150,000) regional medical center. Quality lifestyle in community with strong economy; easy access to D/FW Metroplex. Shared call coverage; incentive package available. Contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 595-1128.

Neurosurgeon—Immediate opportunity for 8E/8C physician with regional medical center in Northeast Texas (service area population 150,000). State-of-the-art technology available; large referral base. Quality lifestyle in a community with strong economy; easy access to Metroplex. Incentive package. Contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 595-1128.

Dallas/Fort Worth Area—First Texas Medical Associates, PA is a growing, multispecialty group practice in the Dallas/Fort Worth area. Denton County, Texas is one of the fastest growing counties in the U.S. Due to this growth, we are recruiting board eligible/certified physicians to meet our needs. Physicians receive a salary and bonus consideration with liberal benefits and the opportunity to become an associate of the group. We have no jr/sr partners and strive to provide an atmosphere that ensures the practice of good medicine. If interested in the opportunities offered to practice with this dynamic group, call 214 420-1484 or send CV to: Margaret 8acon, FTM Associates, PA, 560 W. Main St., Suite 202, Lewisville, Texas 75067.

Flight physicians needed for long distance air ambulance services on a PRN basis. Frequent international flights, high hourly rate. Houston and Dallas. If interested contact SKYCARE Aeromedical Services, 15770 8ellaire 8lvd., #716, Houston, Texas 77083.

Physician Opportunities—Sunbelt—We have unadvertised solo, group and hospital based opportunities for general practice and most specialties. Financial guarantees, benefit packages negotiable. Fee paid. Professionals serving professionals. Send CV to FRH Associates, 5515 New Haven Court, Austin, Texas 78756, or call 512 459-6411.

OPPORTUNITIES SOUGHT

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar 8lvd., Austin, Texas 78701. 512 477-6704, ext. 263.

American graduate, extensive experience, seeks association with or purchase of thriving family or internal medicine practice or minor emergency facility. Please reply to Ad-674, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than 50% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. 8ox 18164, Dallas, Texas 75218; 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $1275; Cardionostic Holter recorder (cassette available) from $995. Smallest, slightest Holters update. Fast service (24-48 hrs.) turnover. Hookup kits starting at $4.95. Special introductory offer of three free tests with any purchase or lease of recorder. Cardiologist overread available for $15. If interested call 1-800-248-0153.

A.D.R. (A.T.L.) 4000 s/I ultrasound machine with aluminum carrying case and roll about table. 3.5 mega hertz sector and linear transducers with video-out. Price $7,900. Contact 512 592-2283 or 512 592-0611.

Wanted—Used mammographic, ultrasound or x-ray equipment. Call Dr. Vancura, 817 774-9994; 2027 S. 61st, Suite 116, Temple, Texas 76501.

Dallas, Texas—Care Cardiac Monitoring System with hardwire central monitor, bedside monitor, telemetry central monitor, recorder, recorder interface board, monitor interface board, cabinet filler, patient transmitter and power supply. For information please call Renee Durante, 8ell Atlantic TriCon Leasing, 201 368-2090, extension 392.

Office Equipment For Sale—Two examination couches with pullout trays, five drawers, stirrups, electrical outlet. Two matching cabinets, round examination stool, x-ray viewing box, dry sterilizer, goose neck lamp, Mayo instrument stand, step-on waste receiver, stacking arm chairs, $1350. Call 409 696-7236 or write Rabin, 2819 Pierre Place, College Station, Texas 77840.

Office Space/Property

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12811 Castle George, San Antonio, Texas 78230.

North Dallas Suburb—Up to 3,400 sq. ft. available in a garden medical office building. One block south of Plano General Hospital. All aspects of lease are negotiable. Call 214 867-6500.

Austin—Medical office space in Medical Science Center, 711 West 38th Street. Approximately 1,577 square foot condominium unit for sale or lease. Prime location, two blocks from Seton Hospital. Two exam rooms, office, reception, two private offices, generous built-ins, phone system installed. 512 346-2100, KRT Management, P.O. 8ox 9802-138, Austin, Texas 78766.

Towers of Town Lake—Security and convenience in luxury high-rise. Concierge, fitness center and other superb amenities. On Town Lake near downtown Austin. Two, three, and four bedrooms from $900/mo. Call 512 477-8866.

Bellaire Boulevard—Handsome, red brick, 3/2½ Georgian home on large corner lot. Custom detailing throughout including crown moldings, marble hearth, woodburning fireplace, brass bath fixtures, custom Marvin wood windows, French doors, hardwood floors, jacuzzi tub, country kitchen, beautiful backyard and more. High $200,000s. Call Centeq Realty, 713 796-8070.

For Rent—Furnished Lake Tahoe, two bedroom condo, one or two weeks during Christmas and/or New Year's week(s). Sleeps six adults. Luxurious resort. $900 per week. Call 011-49-913-260566 or write Neal Johnson, MD, USA MEDDAC, Nuremberg, APO, New York 09105-3501.

Vacation Rentals, Snowmasss, Colorado—House, three bedrooms, three baths, fully equipped, five minutes from ski lifts. Rent direct from owner and save 35 percent. R. N. 8arr, MD, 7301 Mission Road, Prairie Village, Kansas 66208, or call evenings 913 649-1277.

Radiology Office—North Dallas suburb, 1,655 sq. ft., furnished for general radiology and suitable for orthopedics, family practice, or pulmonary medicine. 214 235-0739.

East Texas White-Tail Hunt—8eautiful ranch, excellent facilities, good hunting. 90 miles north and east of Houston. Good place to take your son on his first hunt for the weekend. Housing and food included. Sign up now. For information, call John at 409 969-2504.

Practices

Practice For Sale—Dallas, Casa Linda/White Rock East area. Doctor retiring. Well established practice, excellent for internal medicine or family practice. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice 8roker; 214 327-7765.

Medical Practice For Sale/Partnership—8usy family practice would like to sell or form a partnership for a well established second family practice clinic and minor emergency center located in the Northeast Houston area. Prospective physician must be able to practice full time with financial resources for 50 percent partnership investment. For further information contact: Atascocita Management Corporation, 8067 FM 1960 East, Humble, Texas 77346; phone 713 852-8040 between the hours of 12-7 pm.

Jackson and Coker has 40 practices for sale in 25 states. Specialties include: FP, IM, ORS, O8G, OPH, PD, N, GS, and U. I'm sure one of them is just the practice you have been looking for. Call today for more information. 8ob Kinberger, 404 393-1210.

Family practice/internal medicine practice for sale. Houston urban. Solo practice. Well established. In thriving residential/business area. Near major hospitals. Modern building. Well equipped. Good growth potential. Good cash flow. Reasonable asking price. No financing. Serious inquiries only. Contact Ms. D. Mema, 4815 Apollo Drive, Houston, Texas 77018.

Houston, established minor emergency and family practice clinic at desirable location. X-ray, lab, no O8, no Medicare, no Medicaid, no HMO. 8ig growing potential. Grossed $256K. For sale $129K. No financing. Prime real estate optional. Serious inquiries only. Reply to Ad-660, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

Practice For Sale—FP/GP or internist. Abilene, Texas, population 110,000. Across from 400-bed teaching hospital. Terms negotiable. 915 672-8181 or 915 698-7946; 1234 Sylvan, Abilene, Texas 79605.

Austin Vicinity—Busy internal medicine practice available in attractive community. Shared call coverage. Established practice with proven capability to generate lucrative income in a desirable community offering an excellent lifestyle. Includes all equipment and furnishings. Reasonable price and terms. Contact Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 595-1128.

Ambulatory care center with low volume. Four and one half days per week. Four weeks vacation per year. No call, no inpatients, no weekends. $67,000. Call Elizabeth Ann Adams, 512 892-4820.

Practice For Sale—Bryan. Doctor retiring for health reasons. Well established family practice. Excellent for internal medicine or family practitioner. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice 8roker. 214 327-7765.

Internist (MD)—Excellent opportunity to purchase a fully equipped office (building, equipment, and practice) in Central Texas. Facility can accommodate three to six doctors. Two minutes from new 109-bed hospital. Terms possible. Call Clarence Miller, 512 353-1125, leave word.

For Sale—Thriving internal medicine practice. Heart of medical center, San Antonio. Modern furnishings, lab equipment. Retiring from 30 years in practice. Practice has been approved for financing. For more information contact: Toni Hensley, Pierce, Valdez and Hough, Inc., 8200 IH-10 West, Suite 812, San Antonio, Texas 78230; 512 341-0591.

Dallas, Gynecology—Rewarding gynecological practice, 8aylor Hospital area, offered by retiring physician. 8oard eligible or certified candidates only. Unusual benefits; attractive option to own office space in joint venture medical building. Please reply to Ad-651, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

Dallas Area—Established general pediatric practice for sale. Grossing in excess of $270,000 per year. Shared call coverage. Includes all equipment and furnishings. Reasonable price and terms. Across street from modern hospital. For information without cost or obligation contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 595-1128.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 75080. Contact Dan Lewis at 214 437-1180 office or 214 238-7129 evenings.

For residents, start-up practitioners, and established physicians—Unsecured signature loans $5,000-$60,000. No points or fees. Competitive rates, level payments. Up to six years to repay. Deferred principal option. No prepayment penalties. For information and application, call Austin 512 836-9126, MediFinancial, Harper, or 1-800-331-4952, MediVersal, Dept. 114.

CONTINUING EDUCATION

1988 CME Cruise/Conferences on medicolegal issues and risk management—Caribbean, Mexico, Alaska, China/Orient, Europe, New England/Canada, Trans Panama Canal, South Pacific. Approved for 24-28 CME Cat. I credits (AMA/PRA) and AAFP prescribed credits. Distinguished lecturers. Excellent group rates on finest ships. Registration limited. Pre-scheduled in compliance with IRS requirements. Information: International Conferences, 189 Lodge Avenue, Huntington Station, New York 11746; 516 549-0869.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

Flex-National Board Preparation—November 1987 intensive one week review course in Norfolk, Virginia by professors, MDs and PhDs, medical authors. Prepare yourself thoroughly and professionally in the basic sciences and clinical disciplines. This is a highly structured refresher course. Study notes provided. USN8E Review Center, P.O. 8ox 767, Friendswood, Texas 77546; 713 482-8597.

Army Medical Department Opportunities

The Army Medical Corps offers virtually unlimited opportunities to learn, teach, investigate, practice and direct. For physicians who want more in their health care career than a predictable daily routine, the Army Medical Corps has a lot to offer. There are challenging professional opportunities in patient care, preventive medicine, research, administration and education. A variety of excellent educational programs exist. As a member of the Army Medical Corps, you become a part of one of the largest comprehensive systems of health care in the United States. Numerous medical facilities exist in most states, ranging from clinics and hospitals to world-renowned medical centers. For more information . . .

Phone:

Brooke Army Medical Center
ATTN: HSHE-OP
Fort Sam Houston, TX 78234-6200
(512) 826-0836

Advertising Directory

Air Force	98
American Physicians Insurance Exchange	48
American Physicians Life Insurance	27
Army Medical Department	109
Ayerst Laboratories	18–20, 73–76
BMW Center	28
Bell Atlantic TriCon Leasing	13
Campbell Laboratories, Inc.	98
Certified Medical Representatives Institute, Inc.	90
Ciba-Geigy Corporation	15, 16
Curaflex	25
Diagnostic Clinic of Houston	92
Family Practice Recertification	22
G. E. Information Service	26–27
I.C. System, Inc.	79
Insurance Corporation of America	3rd Cover
Eli Lilly & Company	40
Marion Laboratories	16, 17, 37, 38
McNeil Pharmaceutical	54
The Medical Protective Company	96
MEDS	36
Practice Management Systems, Inc.	83
Roche Laboratories	1, 2, 7, 71, 72
Scott and White Clinic	Back Cover
Michael R. Sharp, Attorney	2nd Cover
Spring Shadows Glen	2nd Cover
Starlite Village Hospital	89
Texas Medical Association	
Advocacy '87/Speaking Out on the Issues	4
Hospital Medical Staff Section	86
Member Services	82
Memorial Library	95
1988 Calendar of Workshops	23, 24
Texas Medical Association Insurance Program	10
Texas Medical Liability Trust	62
Timberlawn Psychiatric Hospital	Back Cover
The Travelers	89
The University of Texas Health Center at Tyler	86
The Upjohn Company	39
Harold Whittington & Associates	29

Texas Physicians' Directory	99–105
Classified Advertising	106–108

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

COURSES

OCTOBER

Basic Sciences

Oct 23-24, 1987
6TH SOUTHERN BIOMEDICAL ENGINEERING CONFERENCE. The Regent Hotel, Dallas. Fee $80 before Oct 1, $100 after Oct 1. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Cardiovascular Disease

Oct 7-10, 1987
CARDIOLOGY AND CARDIOVASCULAR SURGERY: INTERVENTIONS, 1987. Westin Galleria Hotel, Houston. Fee $375 physicians, $225 abstract presenters, $200 housestaff, $225 nurses. Category 1, AMA Physician's Recognition Award; 24 hours. Contact Debby Butler, PO Box 20269, Mail Code 3-276, Houston, TX 77225 (713) 791-2157

Oct 15-17, 1987
CARDIOLOGY UPDATE, 1987. Quail Lodge, Carmel, Calif. Fee $360 members of American College of Cardiology, $425 nonmembers of ACC. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Oct 15-17, 1987
CONTEMPORARY TREATMENT OF CONGESTIVE HEART FAILURE. Hilton of Santa Fe, Santa Fe, NM. Fee $290 members American College of Cardiology, $355 nonmembers. Category 1, AMA Physician's Recognition Award; 19 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Oct 22-24, 1987
NEW TECHNIQUES AND CONCEPTS IN CARDIOLOGY. Hyatt Regency Hotel, Washington, DC. Fee $350 members American College of Cardiology, $395 nonmembers, $200 residents, fellows. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Oct 29-31, 1987
THERAPEUTIC DECISIONS IN CONTEMPORARY PRACTICE OF CARDIOLOGY: PHARMACOLOGICAL THEORY AND PRACTICAL APPLICATIONS. Hyatt Regency Hilton Head, Hilton Head Island, SC. Fee $350 members American College of Cardiology, $415 nonmembers. Category 1, AMA Physician's Recognition Award; 17 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Critical Care Medicine

Oct 7-9, 1987
EMERGING TRENDS IN CRITICAL CARE 1987. Crowne Plaza Hotel, Orlando, Fla. Fee TBA. Category 1, AMA Physician's Recognition Award; 15 hours. Contact Rick Mace, Executive Director, Florida Heart Institute, 500 E Rollins, Suite 101, Orlando, FL 32803 (305) 897-1575

Emergency Care

Oct 22-24, 1987
EMERGENCY MEDICINE UPDATE. Westin Hotel-Galleria, Dallas. Fee $125. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Endocrinology

Oct 1, 1987
A DAY ON ENDOCRINOLOGY. Loews Anatole Hotel, Dallas. Fee $90. Category 1, AMA Physician's Recognition Award; 6 hours. Contact Barbara Grayson, Continuing Education, Baylor University Medical Center, 3500 Gaston, Dallas, TX 75246 (214) 820-2317

Oct 9-10, 1987
INSULIN THERAPY IN THE LATE 1980s. Sheraton South Padre Island Beach Resort, South Padre Island, Tex. Fee $75-$90. Category 1, AMA Physician's Recognition Award; 8.5 hours. AAFP prescribed. Contact Daniel Snare, American Diabetes Association, PO Box 14926, Austin, TX 78761 (512) 343-6981, 1-800-252-8233

Oct 23-24, 1987
MANAGEMENT OF THE COMPLICATIONS OF DIABETES. Westin Oaks Hotel, Houston. Fee TBA. Credit TBA. Contact Carol Soroka, Office of Continuing Education, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Oct 23-24, 1987
2ND ANNUAL DIABETES CENTER CLINICAL SYMPOSIUM. La Mansion del Rio Hotel, San Antonio, Tex. Fee $125. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Kathleen O'Shea, Education Coordinator, Centers of Excellence, 8026 Floyd Curl Dr, San Antonio, TX 78229 (512) 692-3545

Family Medicine

Oct 17-18, 1987
CHRONIC PAIN MANAGEMENT IN PRIMARY CARE. Marriott Hotel-Medical Center, Houston. Fee $150, Category 1, AMA Physician's Recognition Award; 12 hours. Contact Sam Nixon, MD, Division of Continuing Education, The University of Texas Health Science Center, 1100 Holcombe Blvd, Houston, TX 77225 (713) 792-4671

Oct 23-25, 1987
HANDS AND FEET: A PRIMARY CARE SYMPOSIUM. YO Hilton, Kerrville, Tex. Fee $350. Category 1, AMA Physician's Recognition Award; 17 hours. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

General Medicine

Oct 2, 1987-Dallas, Oct 23, 1987-Houston
TEXAS RESEARCH SOCIETY ON ALCOHOLISM SEMINAR/TAKE THE TRIP TO RECOVERY. Room Location TBA. Fee $50. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Robin Herskowitz, TRSA, 4314 Medical Parkway, Suite 300, Austin, TX 78756 (512) 454-0022

Infectious Diseases

Oct 12-15, 1987
ADVANCES IN THE DIAGNOSIS AND TREATMENT OF IMMU-

NOLOGIC AND INFECTIOUS DISEASES. Westin Galleria Hotel, Houston. Fee $305 members American College of Physicians before 1982, resident or research fellow; $230 members ACP after 1982 or associates of ACP; $400 nonmembers. Category 1, AMA Physician's Recognition Award; 23.5 hours. Contact American College of Physicians, PO Box 7777-R-0510, Philadelphia, PA 19175

Malpractice Prevention

Oct 9, 1987
NURSING MALPRACTICE PREVENTION. The University of Texas Medical Branch, Galveston, Tex. Fee $85. .6 CEUs. Contact Gayle Norris, Program Coordinator, Office of Continuing Education, UTMB, 3rd Floor Learning Center, Route J-34, Galveston, TX 77550-2782 (409) 761-2934

Neurology

Oct 10, 1987
RECENT ADVANCES IN EPILEPSY: 3RD ANNUAL UPDATE. Hilton Pavilion, Mesa, Ariz. Fee $95, $65 allied health professionals. Category 1, AMA Physician's Recognition Award; 5.25 hours. Contact Lynne Mascarella, Program Coordinator, Continuing Medical Education, The University of Arizona Health Sciences Center, Tucson, AZ 85724 (602) 626-6707

Obstetrics and Gynecology

Oct 9-10, 1987
9TH ANNUAL SEMINAR IN OBSTETRICS AND GYNECOLOGY. Texas Tech University Health Sciences Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University HSC, Lubbock, TX 79430 (806) 743-2929

Oncology

Oct 11-14, 1987
9TH ANNUAL SYMPOSIUM ON CANCER CHEMOTHERAPY/CANCER CARE: INFORMATION THROUGH APPLICATION. Westin Galleria Hotel, Houston. Fee $230. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Office of Conference Services, The University of Texas M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

Ophthalmology

Oct 9, 1987
CURRENT CONCEPTS IN GLAUCOMA MANAGEMENT. The University of Texas Health Science Center, Room D1.600, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Oct 9, 1987
PHACOEMULSIFICATION COURSE. The University of Texas Health Science Center, San Antonio, Tex. Fee $375. Credit TBA. Contact Continuing Medical Education, UTHSC, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Orthopedic Surgery

Oct 29-31, 1987
DALLAS SHORT COURSE: ORTHOTICS AND PROSTHETICS. The University of Texas Health Science Center, Dallas. Fee $175. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Ann Carlton, Department of Orthopedic Surgery, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3525 or (214) 688-2166

Pediatrics

Oct 2-3, 1987
11TH ANNUAL PEDIATRICS POSTGRADUATE CONFERENCE. Holiday Inn-Civic Center, Lubbock, Tex. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Vicki Hollander, Office of Continuing Medical Education, Texas Tech University Health Sciences Center, Lubbock, TX 79430 (806) 743-2929

Oct 16-17, 1987
PRIMARY CARE PEDIATRICS FOOTBALL WEEKEND. Sheraton Hotel, Waco, Tex. Fee $100. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Plastic Surgery

Oct 7-10, 1987
TISSUE EXPANSION SYMPOSIUM. Westin St Francis Hotel, San Francisco. Fee $575 members American Society of Plastic and Reconstructive Surgery, $450 residents, $650 guest physicians. Category 1, AMA Physician's Recognition Award; 26 hours. Contact Plastic Surgery Educational Foundation, Exchange National Bank, PO Box 74140, Chicago, IL 60690 (312) 856-1818

Psychiatry

Oct 1-2, 1987
SCHIZOPHRENIA AND THE FAMILY: INTEGRATING PSYCHOEDUCATIONAL AND FAMILY THERAPY APPROACHES. Seeley Conference Center, The Menninger Foundation, Topeka, Kan. Fee $185. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Brenda Vink, Conference Coordinator, Division of Continuing Education, The Menninger Foundation, Box 829, Topeka, KA 66601 (913) 273-7500, ext 5991

Oct 7-28, 1987
JUNGIAN PSYCHOLOGY II, III. Room D1.200, The University of Texas Health Science Center, Dallas. Fee $150 for each 1 month series. Category 1, AMA Physician's Recognition Award; 10 hours each series. Contact Freddie Heitman, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Oct 9-10, 1987
CHILD AND FAMILY MENTAL HEALTH: NEW CHALLENGES. Pan American University, Edinburgh, Tex. Fee $95, $45 nonphysicians. Category 1, AMA Physician's Recognition Award; 11 hours. 1.1 CEUs. Contact Martha Berlin, Program Coordinator, Office of Continuing Education, UTMB, 3rd Floor Learning Center, J-34, Galveston, TX 77550-2782 (409) 761-2934

Radiology

Oct 26-28, 1987
MAGNETIC RESONANCE IMAGING/NIH DEVELOPMENT CONFERENCE. Masur Auditorium, Warren Grant Magnuson Clinical Center, Bethesda, Md. No fee. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Sharon Feldman, Prospect Association, Suite 500, 1801 Rockville Pike, Rockville, MD 20852 (301) 468-6555

Oct 30-Nov 1, 1987
DIAGNOSTIC RADIOLOGY UPDATE. Lincoln Hotel, Dallas. Fee $325. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Dolly Christensen, Department of Radiology, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2502 or 688-2166

Surgery

Oct 17-18, 1987
REGIONAL REVIEW COURSE IN HAND SURGERY. Denver. Fee TBA. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Terri Harrington, American Society for Surgery of the Hand, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Oct 30-31, 1987
GENERAL SURGERY UPDATE, 1987. Marriott Hotel, Medical Center, Houston. Fee $200. Category 1, AMA Physician's Recognition Award; 12 hours. AAFP prescribed. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

NOVEMBER

Emergency Care

Nov 12-14, 1987
7TH ANNUAL WILLIAM BEAUMONT ARMY MEDICAL CENTER

TRAUMA SYMPOSIUM: CONTROVERSIES IN HEAD AND NECK TRAUMA. El Paso Airport Hilton Hotel, El Paso, Tex. Fee $80 physicians, $30 residents. Category 1, AMA Physician's Recognition Award; 23 hours. Contact Marty May, DAC, Trauma Secretary, WBAMC, El Paso, TX 79920-5001 (915) 569-2621 or (915) 569-2787

Endocrinology

Nov 12-14, 1987
DIABETES UPDATE 1987. San Luis Hotel, Galveston, Tex. Fee $200 before Oct 20, $225 after Oct 20. Category 1, AMA Physician's Recognition Award; 13 hours. AAFP prescribed. Contact Martha Berlin, Program Coordinator, Office of Continuing Education, The University of Texas Medical Branch, 3rd Floor Learning Center, Route J-34, Galveston, TX 77550-2782, (409) 761-2934

Gastroenterology

Nov 14, 1987
GASTROINTESTINAL ENDOSCOPY: PERSPECTIVES AND REFLECTIONS. Lincoln Hotel Post Oak, Houston. Fee $150. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

Nov 5-7, 1987
HISPANIC HEALTH STATUS SYMPOSIUM. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact Juan Flores, Center for Health Policy Development, Inc, 2300 W Commerce St, Suite 304, San Antonio, TX 78207

Nov 8, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. San Antonio. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Internal Medicine

Nov 20-21, 1987
UPDATE IN SEXUALLY TRANSMITTED DISEASES. The University of Texas Health Science Center, Dallas. Fee $75. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Obstetrics and Gynecology

Nov 3-7, 1987
CONTEMPORARY ISSUES AND PRACTICES IN OB/GYN. Lincoln Hotel, Dallas. Fee $475 complete course, $325 basic course, $150 pathology course. Category 1, AMA Physician's Recognition Award; 36 hours. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Nov 4-6, 1987
UPDATE IN PELVIC AND VAGINAL SURGERY. Four Seasons Hotel, San Antonio, Tex. Fee $250. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Nov 13, 1987
PREVENTION OF PRETERM DELIVERY/LOW BIRTH WEIGHT: STATE OF THE ART. Wyndham Southpark Hotel, Austin, Tex. Fee $25. Credit TBA. Contact Donna Wysocki, 1018 W 11th St, Austin, TX 78703 (512) 474-6981

Nov 13-14, 1987
OFFICE GYNECOLOGY AND FOOTBALL WEEKEND. Texas A&M College of Medicine, College Station, Tex. Fee $125. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Oncology

Nov 8-11, 1987
GENETIC MECHANISMS AND CANCER/40TH ANNUAL SYMPOSIUM ON FUNDAMENTAL CANCER RESEARCH. Westin Galleria Hotel, Houston. Fee $300 before Oct 21, $350 after Oct 21. Credit TBA. Contact Office of Conference Services, M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

Pediatrics

Nov 13-14, 1987
PEDIATRICS FOR THE PRACTITIONER: 21ST ANNUAL KENNETH C. HALTALIN PEDIATRICS SEMINAR. Lincoln Hotel, Dallas. Fee TBA. Category 1, AMA Physician's Recognition Award; 11 hours. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Psychiatry

Nov 21, 1987
UPDATE IN PSYCHIATRY: ANXIETY DISORDERS FROM FREUD TO PHYSIOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Nov 4-25, 1987
JUNGIAN PSYCHOLOGY II, III. Room D1.200, The University of Texas Health Science Center, Dallas. Fee $150 for each 1 month series. Category 1, AMA Physician's Recognition Award; 10 hours each series. Contact Freddie Heitman, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Orthopedic Surgery

Nov 13-14, 1987
THE DISTAL RADIOULNAR JOINT: PROBLEMS AND PROCEDURES. Hotel Royal Plaza, Orlando, Fla. Fee $425 before Oct 16, $475 after Oct 16. Category 1, AMA Physician's Recognition Award; 12.25 hours. Contact the American Society for Surgery of the Hand, 3025 South Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Radiology

Nov 4-7, 1987
7TH FUNDAMENTALS OF MRI. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Surgery

Nov 4-7, 1987
2ND INTERNATIONAL CONGRESS ON CYCLOSPORINE. Sheraton Washington, Washington, DC. Fee $300 professionals, $150 paraprofessionals and others. Credit TBA, 26 hours. Contact Alice Reardon, Continuing Education Division, G.104 MSB, The University of Texas Medical School, 6431 Fannin, Houston, TX 77030 (713) 792-5346

DECEMBER

Computer Applications

Dec 7-8 and Dec 10-11, 1987
COMPUTER APPLICATIONS: AN INTRODUCTORY WORKSHOP. Houstonian Hotel and Conference Center, Houston. Fee TBA. Credit TBA. Contact Robin Murray, The American College of Obstetricians and Gynecologists, 600 Maryland Ave, SW, Washington, DC, 20024-2588 (202) 638-5577, ext 343

Emergency Care

Dec 6-12, 1987
EMERGENCIES IN INTERNAL MEDICINE. Frenchman's Reef Resort, St Thomas, Virgin Islands. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Family Medicine

Dec 4-5, 1987
UPDATE OF MEDICAL AND SURGICAL MANAGEMENT OF GASTROINTESTINAL DISORDERS. Hyatt Regency Hotel, San Antonio, Tex. Fee $125, no charge for physicians in training with letter from program director. Category 1, AMA Physician's Recognition Award; 9 hours. Contact Kathleen O'Shea, Humana Hospital, 8026 Floyd Curl Dr, San Antonio, TX 78229 (512) 692-3545

Dec 11-12, 1987
2ND ANNUAL PRIMARY CARE RESEARCH METHODS AND STATISTICS. Gunter Hotel, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Infectious Diseases

Dec 5-6, 1987
2ND ANNUAL INFECTIOUS DISEASES SYMPOSIUM. Providence Memorial Hospital, El Paso, Tex. Fee $150 physicians, $75 residents, interns, students. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Karen DeLong, Providence Memorial Hospital, 2001 N Oregon St, El Paso, TX 79902 (915) 542-6001

Ophthalmology

Dec 3-5, 1987
CONTACT LENS TECHNOLOGY. Stouffer's Greenway Plaza Hotel, Houston. Fee $275. Credit TBA. Contact Bette Burkett, Contact Lens Technology Course, Cullen Eye Institute, Baylor College of Medicine, 6501 Fannin, Houston, TX 77030 (713) 799-5942

Pathology

Dec 12, 1987
44TH ANNUAL PATHOLOGY SEMINAR: PROBLEMS IN LIVER PATHOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

Dec 3-6, 1987
INNOVATIVE AND CONTROVERSIAL STRATEGIES IN REHABILITATION. Sheraton Bal Harbour, Miami. Fee TBA. Credit TBA. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Plastic Surgery

Dec 4-5, 1987
CONTEMPORARY CONCEPTS IN FACIAL SURGERY. The Waldorf Astoria, New York. Fee $675, $350 residents. Category 1, AMA Physician's Recognition Award; 11 hours. Contact Francine Leinhardt, Course Coordinator, Manhattan Eye, Ear and Throat Hospital, 210 E 64th St, New York, NY 10021 (212) 838-9200 ext 2776

Radiology

Dec 7-11, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Baylor Center for Imaging Research, The Woodlands, Tex. Fee $1,000 physicians, $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Risk Management

Dec 18, 1987
A CASE STUDY APPROACH TO RISK MANAGEMENT AND MALPRACTICE. Sheraton Bal Harbour, Miami. Fee $175. Category 1, AMA Physician's Recognition Award; 6 hours. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Surgery

Dec 3-4, 1987
SURGICAL HEALTH POLICY AND FINANCE. The Waldorf Astoria, New York. Fee $400, $200 residents. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

JANUARY

Orthopedic Surgery

Jan 16, 1988
DIABETIC FOOT CONFERENCE. Location TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Otolaryngology

Jan 31-Feb 5, 1988
SURGICAL ANATOMY AND TECHNIQUES OF THE TEMPORAL BONE. Dallas. Contact Ann Hood, RN, 3600 Gaston Ave, Barnett Tower, #1105, Dallas, TX 75246 (800) 443-1762

Pediatrics

Jan 12-17, 1988
17TH ANNUAL PEDIATRIC POSTGRADUATE COURSE/PEDIATRIC UPDATE 1988. Puerto Vallarta, Mexico. Contact Ann Boehme, Schneider Children's Hospital of Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

Radiology

Jan 25-29, 1988
ANATOMY FOR RADIOTHERAPY TREATMENT PLANNING. San Antonio, Tex. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Sports Medicine

Jan 21-23, 1988
15TH ANNUAL SPORTS MEDICINE SYMPOSIUM. San Antonio, Tex. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Urology

Jan 23-24, 1988
TRANSITIONAL CELL CARCINOMA OF THE URINARY TRACT. New Hyde Park, NY. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

FEBRUARY

Anesthesiology

Feb 7-18, 1988
BAY-CAP XI: TACO IV. Hawaii, Kauai, Maui. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Cardiovascular Disease

Feb 11-13, 1988
2ND ANNUAL UCSD-SHARP MEMORIAL HOSPITAL INTERNATIONAL CARDIAC SYMPOSIUM: CLINICAL STRATEGIES IN COMPLEX VALVULAR HEART DISEASE. US San Diego. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Geriatrics

Feb 18-20, 1988
MANAGEMENT OF THE ELDERLY II. Miami Beach, Fla. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Feb 27-28, 1988
9TH ANNUAL GERIATRIC MEDICINE: SELECTED TOPICS. San Antonio, Tex. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Neurology

Feb 2-7, 1988
NEUROLOGY UPDATE 1988. Miami Beach, Fla. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Oncology

Feb 4-6, 1988
3RD INTERNATIONAL CONFERENCE ON MONOCLONAL ANTIBODY IMMUNOCONJUGATES FOR CANCER. San Diego. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, California 92093 (619) 534-3940

Feb 25-27, 1988
2ND INTERNATIONAL CONFERENCE ON INTRACAVITARY CHEMOTHERAPY. San Diego. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Plastic Surgery

Feb 26-28, 1988
BASIC RHINOPLASTY. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Urology

Feb 11-13, 1988
CALCULI UPDATE 1988. Acapulco, Mexico. Contact Alice Henderson, 6750 West Loop South, Ste 900, Bellaire, TX 77401 (713) 665-7500

MARCH

Allergy

March 2-6, 1988
1988 PAN AMERICAN ALLERGY SOCIETY TRAINING COURSE AND SEMINAR. San Antonio, Tex. Contact Betty Kahler, PAAS, 229 Parking Way, Lake Jackson, TX 77566 (409) 297-5635 or (409) 297-4069

Cardiovascular Disease

March 27-30, 1988
PRACTICAL ASPECTS OF CARDIOVASCULAR DISEASE AND RENAL DRUGS. Lake Buena Vista, Walt Disney World, Fla. Contact Division of Continuing Medical Education D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Family Medicine

March 17-20, 1988
13TH ANNUAL FAMILY PRACTICE RECERTIFICATION REVIEW. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Geriatrics

March 13-16, 1988
GERIATRIC MEDICINE RECERTIFICATION REVIEW. San Antonio, Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

March 19-26, 1988
THE BRITISH EXPERIENCE: A STUDY TOUR IN ENGLAND ON PUBLIC AND PRIVATE CARE INNOVATIONS FOR THE AGED. England. Contact Pat Ashton, Holbrook Travel, 3540 NW 13th St, Gainesville, Fla 32609 (800) 451-7111

Ophthalmology

March 18-20, 1988
CLINICAL ADVANCES IN OPHTHALMOLOGY FOR THE PRACTICING OPHTHALMOLOGIST/THE CULLEN COURSE 1988. Houston. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Otolaryngology

March 10-12, 1988
CURRENT CLINICAL CONCEPTS IN OTOLARYNGOLOGY. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Pathology

March 7-11, 1988
CURRENT CONCEPTS IN TOXICOLOGY. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category I, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

EF TELEPLAST TELECONFERENCE

Oct 17, 1987, Saturday, 10 am to 12 pm
COSMETIC EYELID SURGERY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

Dec 5, 1987, Saturday, 10 am to 12 pm
SECONDARY RHINOPLASTY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

SEPTEMBER

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
Sept 16, 1987, Bexar County Medical Society Headquarters, San Antonio
Sept 18, 1987, El Paso Marriott, El Paso
Sept 29, 1987, Holiday Inn Civic Center, Lubbock
Sept 30, 1987, Holiday Inn Country Villa, Midland

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Sept 12, 1987, Four Seasons Hotel, Austin

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
Sept 16, 1987, Bexar County Medical Society Headquarters, San Antonio
Sept 18, 1987, El Paso Marriott, El Paso
Sept 29, 1987, Holiday Inn Civic Center, Lubbock
Sept 30, 1987, Holiday Inn Country Villa, Midland

OCTOBER

GEARING UP FOR RETIREMENT—4 hours
Oct 23-25, 1987, Inn on the Park, Houston

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
Oct 2, 1987, Dallas Marriott-Market Center, Dallas
Oct 9, 1987, Sheraton Tyler Inn and Towers, Tyler
Oct 13, 1987, Hillcrest Baptist Medical Center, Waco
Oct 14, 1987, Green Oaks Inn and Conference Center, Fort Worth
Oct 16, 1987, Marriott Hotel-Astrodome, Houston

HOW TO RUN A MORE PROFITABLE PRACTICE
Oct 6, 1987, The Lincoln Hotel Post Oak, Houston
Oct 7, 1987, Wyndham Hotel, San Antonio
Oct 8, 1987, Guest Quarters, Austin

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Oct 10, 1987, Hilton Palacio del Rio, San Antonio

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
Oct 2, 1987, Dallas Marriott-Market Center, Dallas
Oct 9, 1987, Sheraton Tyler Inn and Towers, Tyler
Oct 13, 1987, Hillcrest Baptist Medical Center, Waco
Oct 14, 1987, Green Oaks Inn and Conference Center, Fort Worth
Oct 16, 1987, Marriott Hotel-Astrodome, Houston

NOVEMBER

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Nov 11-12, 1987, St Paul Medical Center, Dallas
Nov 13-14, 1987, Texas Tech Regional Academic Health Center, El Paso
Nov 18-19, 1987, Marriott Hotel-Astrodome, Houston
Nov 20-21, 1987, Texas Tech University Health Sciences Center, Lubbock

HOW TO RUN A MORE PROFITABLE PRACTICE
Nov 4, 1987, Sheraton Amarillo Hotel and Towers, Amarillo
Nov 5, 1987, The Summit Hotel, Dallas

PERSONAL INCOME AND ESTATE TAX PLANNING
Nov 7-8, 1987, Dallas Marriott Quorum, Dallas

CALENDAR OF MEETINGS ■Denotes Texas Meetings

SEPTEMBER

AMERICAN ACADEMY OF OTOLARYNGOLOGY: HEAD AND NECK SURGERY ANNUAL MEETING, Chicago, Sept 20-24, 1987. Sharon Crowel, 1101 Vermont Ave NW, Suite 302, Washington, DC 20005 (202) 289-4607

AMERICAN COLLEGE OF RADIOLOGY ANNUAL MEETING, Seattle, Sept 12-17, 1987. Sheila Aubin, 1891 Preston White Dr, Reston, VA 22091 (703) 648-8900

■AMERICAN SOCIETY FOR SURGERY OF THE HAND/42ND ANNUAL MEETING, San Antonio, Sept 9-12, 1987. ASSH, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

■AMERICAN SOCIETY FOR SURGERY OF THE HAND/5TH ANNUAL RESIDENTS' AND FELLOWS' CONFERENCE, San Antonio, Sept 9-12, 1987. ASSH, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

■**TEXAS MEDICAL ASSOCIATION FALL CONFERENCE**, Austin, Sept 25-27, 1987. Contact Robert Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

■TEXAS PEDIATRIC SOCIETY ANNUAL MEETING, Houston, Sept 11-13, 1987. Contact Mary Greene, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

OCTOBER

12TH ANNUAL INTERNATIONAL BODY IMAGING CONFERENCE, Maui, Hawaii, Oct 10-18, 1987. Contact Annual Body Imaging Conference, Dept of Radiology, Nu Med Regional Medical Center, 22141 Roscoe Blvd, Canoga Park, CA 91304 (818) 340-0580, ext 280

AMA NATIONAL CONFERENCE ON THE IMPAIRED HEALTH PROFESSIONAL, Chicago, Oct 8-11, 1987. Contact Janice Robertson, AMA Dept of Substance Abuse, 535 N Dearborn St, Chicago, IL 60610 (321) 645-5083

AMERICAN COLLEGE OF CHEST PHYSICIANS 53RD ANNUAL SCIENTIFIC ASSEMBLY, Atlanta, Oct 26-30, 1987. ACCP, Division of Education, 911 Busse Hwy, Park Ridge, IL 60068-2375 (312) 698-2200

■AMERICAN COLLEGE OF GASTROENTEROLOGY ANNUAL MEETING AND POSTGRADUATE COURSE, Dallas, Oct 24-28, 1987. Contact Gardner McCormick, ACG, 13 Elm St, Manchester, MA 01944 (617) 927-8330

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION/AMERICAN CONGRESS OF REHABILITATION MEDICINE JOINT ANNUAL MEETING, Orlando, Fla, Oct 18-23, 1987. Contact Connie Van Brunt McMillan, Director of Marketing Communications, ACRM/AAPM&R, 122 S Michigan Ave, Suite 1300, Chicago, IL 60603-6107 (312) 922-9366

AMERICAN DENTAL ASSOCIATION ANNUAL MEETING, Las Vegas, Oct 10-13, 1987. Contact Edward Jeske, ADA, 211 E Chicago Ave, Chicago, IL 60611 (312) 440-2657

AMERICAN DIETETIC ASSOCIATION 70TH ANNUAL MEETING, Atlanta, Oct 19-23, 1987. Barbara Mueller, Dept of Meetings, 430 N Michigan Ave, Chicago, IL 60611 (312) 280-5031

AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE ANNUAL CONVENTION, New Orleans, Oct 6-9, 1987. Barbara Hairfield, Director of Convention and Education Services, 4405 East-West Hwy, Suite 504, Bethesda, MD 20814 (301) 656-6117

AMERICAN PSYCHIATRIC ASSOCIATION INSTITUTE ON HOSPITAL AND COMMUNITY PSYCHIATRY ANNUAL MEETING, Boston, Oct 25-29, 1987. Kathleen Bryan, Director, Meetings Management, 1400 K St, NW, Suite 503, Washington, DC 20005 (202) 682-6100

AMERICAN SCHOOL HEALTH ASSOCIATION ANNUAL MEETING AND EXHIBITION, Indianapolis, Oct 6-10, 1987. Contact Dana Davis, ASHA, PO Box 708, Kent, Ohio 44240 (216) 678-1601

AMERICAN SOCIETY OF ANESTHESIOLOGISTS ANNUAL MEETING, Atlanta, Oct 10-14, 1987. Contact William Marinko, ASA, 515 Busse Hwy, Park Ridge, IL 60068 (312) 825-5586

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Cincinnati, Oct 25-27, 1987. Contact AAMI, 1901 N Fort Myer Dr, Suite 602, Arlington, VA 22209-1699 (800) 332-2264

■CARDIOLOGY AND CARDIOVASCULAR SURGERY: INTERVENTIONS, 1987 ANNUAL SYMPOSIUM CELEBRATING THE 25TH ANNIVERSARY OF THE TEXAS HEART INSTITUTE, Houston, Oct 7-10, 1987. Contact Debby Butler, Texas Heart Institute, PO Box 20269, Houston, TX 77225-0269

INTERNATIONAL FEDERATION OF PSYCHOANALYTIC SOCIETIES 5TH SCIENTIFIC CONFERENCE, New York, Oct 9-12, 1987. Contact Ann Turkel, MD, 350 Central Park West, New York, NY 10025 (212) 831-3400

SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS 38TH ANNUAL WORKSHOPS AND SCIENTIFIC MEETING, Los Angeles, Oct 26-31, 1987. Contact Marion Kenn, Director of SCEH, PO Box 2427, Liverpool, NY 13089-2427 (315) 652-7299

■SOCIETY OF TEACHERS OF FAMILY MEDICINE SOUTH CENTRAL REGIONAL MEETING, Houston, Oct 8-10, 1987. Marjorie Kraft, The University of Texas Medical School, 6431 Fannin, G.104, Houston, TX 77030 (713) 792-5346

WESTERN SOCIETY OF ALLERGY AND IMMUNOLOGY 26TH ANNUAL SCIENTIFIC SESSION, Lake Tahoe, Nev, Oct 15-17, 1987. Contact Joyce Gullixson, WSAI, 1700 SW Columbia, Portland, OR 97201 (503) 224-6159

NOVEMBER

11TH NATIONAL CONFERENCE ON CORRECTIONAL HEALTH CARE, Chicago, Nov 5-7, 1987. Contact Jodie Manes, National Commission on Correctional Health Care, 2000 N Racine, Suite 3500, Chicago, IL 60614 (312) 528-0818

ALL AMERICAS HEALTH '87: INTERNATIONAL CONFERENCE AND EXHIBITION OF MEDICAL AND HOSPITAL EQUIPMENT, Tampa, Fla, Nov 15-18, 1987. Contact Tampa Convention Facilities Department (813) 223-8424

■AMERICAN ACADEMY OF OPHTHALMOLOGY ANNUAL MEETING, Dallas, Nov 8-12, 1987. Contact Bill Jenkinson, AAO, PO Box 7424, San Francisco, CA 94120-7424 (415) 561-8500

AMERICAN SOCIETY OF CYTOLOGY 35TH ANNUAL MEETING, New Orleans, Nov 4-8, 1987. Contact Bernard Naylor, MD, ASC, 1015 Chestnut St, Suite 1518, Philadelphia, PA 19107 (215) 922-3880

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS ANNUAL MEETING, Atlanta, Nov 8-13, 1987. Contact Henry Kawamoto Jr, MD, 2001 Santa Monica Blvd, Santa Monica, CA 90404 (213)829-0391

AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS ANNUAL MEETING, Atlanta, Nov 8-13, 1987. Contact Carol Lazier, ASPRS, 233 N Michigan Ave, Suite 1900, Chicago, IL 60601 (312) 856-1818

ASSOCIATION OF AMERICAN MEDICAL COLLEGES ANNUAL MEETING, Washington, DC, Nov 7-21, 1987. Contact Kathleen Turner, AAMC, 1 Dupont Circle, NW, Ste 200, Washington, DC, 20036 (202) 828-0400

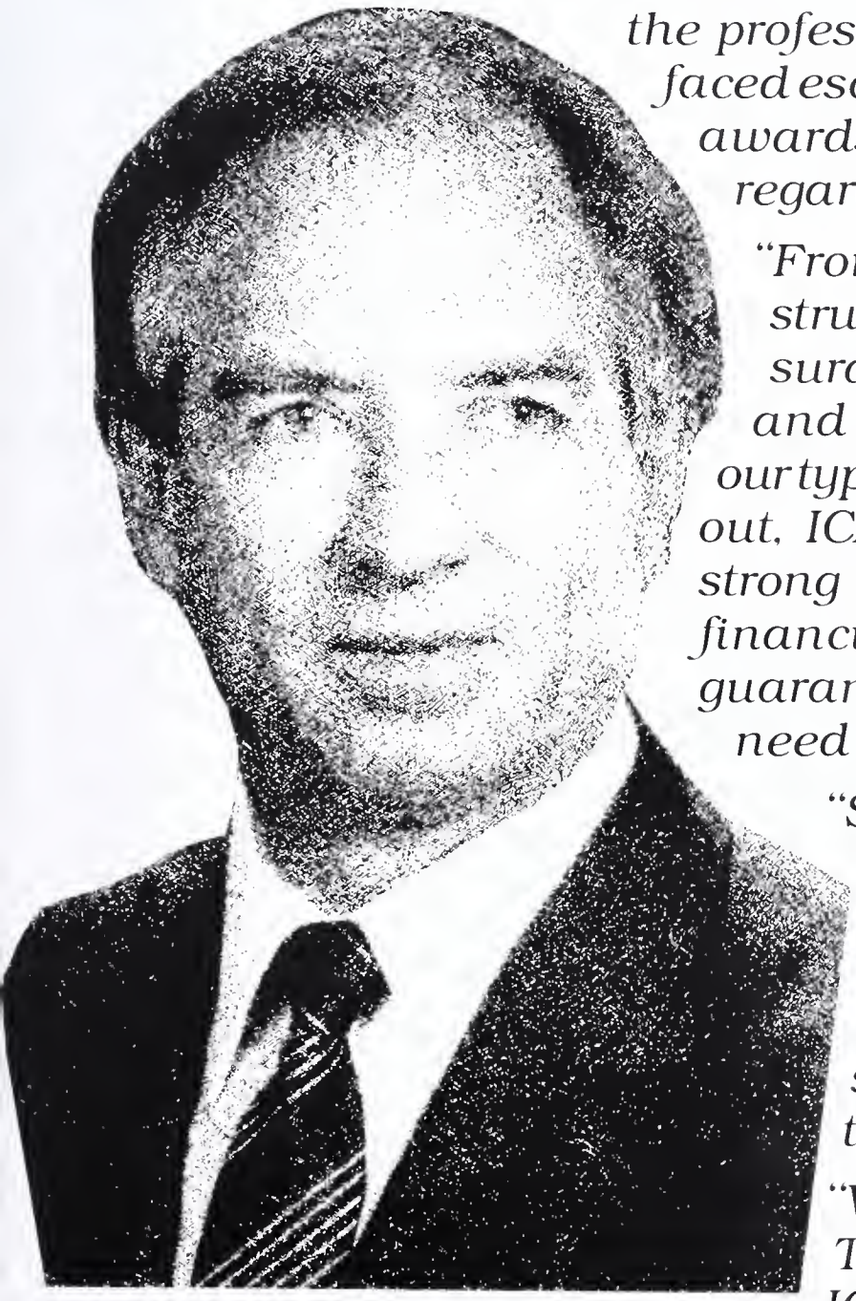
ASSOCIATION OF MILITARY SURGEONS OF THE US 94TH ANNUAL MEETING, Las Vegas, Nov 6-13, 1987. Contact Linda Hines, AMS, PO Box 104, Kensington, MD 20895, (301) 933-2801

■M.D. ANDERSON HOSPITAL 31ST ANNUAL CLINICAL CONFERENCE/RECENT ADVANCES IN THE SYSTEMIC THERAPY OF GENITOURINARY MALIGNANCIES, Houston, Nov 11-14, 1987. Contact Office of Conference Services, Box 131, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

ASSOCIATION OF MILITARY SURGEONS OF THE US 94TH ANNUAL MEETING, Las Vegas, Nov 8-13, 1987. Contact Convention Manager, AMSUS, PO Box 104, Kensington, MD 20895 (301) 933-2801

■**TEXAS MEDICAL ASSOCIATION INTERIM SESSION**, Austin, Nov 20-21, 1987. Contact Robert Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

"We Understand Your Frustration."



DOYLE N. ROGERS, MD, FCAP, JD
Chairman, President, CEO

"You don't need to be told how tough the last few years have been in the professional liability arena. You've faced escalating premiums, escalating awards and escalating frustrations, regardless who insures you.

"From our side of the table, we've struggled with diminishing reinsurance, exhorbitant claims costs and an industry-wide change in our type of insurance policy. Throughout, ICA has strived to maintain a strong balance sheet, because our financial stability is your only real guarantee that we'll be here if you need us.

"So, we made tough and sometimes, unpopular, decisions. But the bottom line is this: We've positioned ourselves as a strong force in the professional liability business, for today and tomorrow.

"We'll be here if you need us. That's what we both want. At ICA, we're committed to protecting your practice."

ICA
INSURANCE
CORPORATION
OF AMERICA

Houston, Texas (713) 871-8100
The Professional Liability Specialist

S&W SCOTT&WHITE

Texas A&M University
College of Medicine

Department of Pediatrics

presents

Third Annual
PEDIATRIC CONFERENCE

for the Primary Care Physician
and
FOOTBALL WEEKEND
(TEXAS A&M vs Baylor University)

Sheraton Hotel
WACO, TEXAS
October 16-17, 1987

Department of Emergency Medicine

presents

Third Annual
EMERGENCY MEDICINE REVIEW

for the Primary Care Physician

The Westin Hotel Galleria
DALLAS, TEXAS
October 23-24, 1987

For more information or to register contact: Office of Continuing Medical Education, (817) 774-2350, Scott and White, Temple, Texas 76508.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223 214/381-7181

PAGES IN
ECTIONS

TION 2
TEMBER 1987

Texas Medicine

RRENT
EA

Texas Cancer Plan
Oncology Guidelines Report

Diagnosis and Treatment
of Selected Cancers

Oncology Workgroups
Legislative Task Force
on Cancer in Texas, 1987

Texas medicine
UCSF LIBRARY
Received on: 09-25-87

Oncology Guidelines Report

Contents

2 ACKNOWLEDGMENT

3 PREFACE

4 HEAD AND NECK CANCER

Head and Neck Oncology Workgroup
Helmuth Goepfert, MD, Chairman
Jerry L. Barker, MD; Lanny G. Close, MD; Aly H. El-Domeiri, MD; Daniel E. Epley, MD; John F. Helfrick, DDS; W. Ki Hong, MD; Daniel E. Lehane, MD; George David Neal, MD; John C. O'Brien, Jr, MD; John J. Senyszyn, MD; Robert M. Steckler, MD; Dan Von Hoff, MD

17 UROLOGIC CANCER

Urologic Oncology Workgroup
David A. Swanson, MD, Chairman
William A. Anthony, MD; Odis Lynn Avant, MD; Wickliffe Pickett Curtis, MD; John M. Ferrell, Jr, MD; Gerald T. Keegan, MD; Theodore R. McMillin, Jr, MD; Paul C. Peters, MD; Michael Sarosdy, MD; Michael M. Warren, MD; Gunar K. Zagars, MD

24 PEDIATRIC CANCERS

Pediatric Oncology Workgroup
Jan van Eys, MD, PhD, Chairman
William Paul Bowman, MD; Howard A. Britton, MD; George R. Buchanan, MD; Donald Joseph Fernbach, MD; Mary Ellen Haggard, MD; Judy K. Mullins, MD; Robert E. Myers, MD; Jerry James Swaney, MD

46 COLORECTAL CANCER

Colorectal Oncology Workgroup
Wayne H. Schwesinger, MD, Chairman
H. Randolph Bailey, MD; Peter C. Canizaro, MD; Frank L. Lanza, MD; Joseph Dean McCracken, MD; J. Patrick O'Leary, MD; Edwin D. Savlov, MD; Noel Bonham Searle, MD; John Robert Stroehlein, MD; Ralph Frederick Wells, MD; Resource Consultant, Tyvin A. Rich, MD

53 GYNECOLOGIC CANCER

Gynecologic Oncology Workgroup
Joseph S. Lancaster, MD, Chairman
Ralph J. Anderson, MD; Charles V. Capen, MD; Robert P. Carter, Jr, MD; J. Stanley Conner, MD; Luis Delclos, MD; Jacob B. Green III, MD; Fred M. Massey, MD; Joseph A. Zavaletta, MD

59 HEMATOLOGY-ONCOLOGY

Hematology-Oncology Workgroup
Frank H. Gardner, MD, Chairman
Jack B. Alperin, MD; James A. Belli, MD; Patrick C. Farley, MD; Eugene P. Frenkel, MD; John R. Redman, MD; G. David Roodman, MD; David A. Sears, MD; Arthur A. Trowbridge, Jr, MD

72 LUNG CANCER

Lung Oncology Workgroup
William J. deGroot, MD, Chairman
John C. Bagwell, MD; Patricia A. Buffler, PhD; Claude Y. Chong, MD; Charles R. Denham, MD; Stanton P. Fischer, MD; William Gordon, Jr, MD; Frederick L. Grover, MD; John M. Lukeman, MD; Clifton F. Mountain, MD; Ted M. Nicklaus, MD; H. Irving Schweppe, Jr, MD; C. Porter Storey, Jr, MD; Geoffrey R. Weiss, MD

81 BREAST CANCER

Breast Oncology Workgroup
George R. Brown, MD, Chairman
Robert E. Askew, MD; H. Stephen Gallager, MD; Gabriel N. Hortobagyi, MD; Eleanor D. Montague, MD; Louis Eaton Neff, MD; C. Kent Osborne, MD; George J. Race, MD, PhD; Robert J. Salem, MD; Courtney M. Townsend, Jr, MD; Dennis E. Welch, MD

96 GENERAL REFERENCES

96 CONTRIBUTORS

Acknowledgment

Publication of the "Oncology Guidelines Report" is a joint effort of the Texas Cancer Council, the American Cancer Society, Texas Division, Inc, and the Texas Medical Association.

Funds for this educational project have been provided by the Texas Cancer Council and the American Cancer Society, Texas Division, Inc.

The Texas Medical Association, through its *Texas Medicine* and Council on Scientific Affairs offices, has provided coordination and technical services for printing, production, and distribution.

Preface

This volume contains guidelines for optimal cancer care in major cancer sites, developed by the oncology workgroups of the Legislative Task Force on Cancer in Texas, between November 1985 and January 1987. The task force was appointed in February 1984 by Texas Speaker of the House Gib Lewis to identify priority cancer control issues and propose methods for improving programs in cancer prevention, detection, and treatment.

Committees and workgroups were assigned to address these tasks in specific areas: physician education, nurse education, public education, community cancer care, clinical investigation, and optimal cancer care. The results of the task force's efforts are reported in *The Texas Cancer Plan: Actions and Directions for the Future—1986–2000.*

The optimal cancer care guidelines published herein play a key role in the implementation of the Texas Cancer Plan.

This effort in Texas was envisioned as serving a number of purposes:

—To improve the quality of care for all Texans with cancer;

—To encourage networking of physicians, facilities, and cancer resources;

—To serve as measures of the adequacy of cancer resources and services;

—To serve as a curriculum for the training and education of physicians; and

—To serve as a planning tool for facilities developing cancer programs.

In addition, the guidelines are part of a longitudinal physician education effort in cancer prevention, detection, and treatment from medical school through continuing education.

To develop these guidelines, 87 cancer specialists from all regions of the state were organized into eight site-specific oncology workgroups. Each workgroup was multidisciplinary, including medical oncologists, surgeons, radiotherapists, and other specialists, and representing academic medicine, cancer care centers, and private practice. A complete list of contributors is included at the end of this volume.

The workgroups used a number of documents as models and points of departure for their work: the guidelines developed by physicians in the Community Hospital Oncology Programs sponsored by the National Cancer Institute in Binghamton and Brooklyn, NY; Kalamazoo, Mich; and Toledo, Ohio; *Clinical Oncology: A Multidisciplinary Approach*, edited by Philip Rubin; and current treatment information available through the Physicians Data Query Cancer Information (PDQ) database developed by the National Cancer Institute.

This volume includes cancers of the breast; colorectum; head and neck; lung; male urogenital area; female cervix, endometrium and ovary; hematology-oncology; and cancers in children. The 38 sites selected are estimated to cover 76% of new cancer cases and 70.5% of cancer deaths in the United States.

The resulting works present a physician's perspective of a rapidly changing field and offer a pragmatic set of guidelines meant for busy physicians who need to make decisions regarding primary care, consultation, or referral of suspected or confirmed cancer cases. Each report describes the epidemiology and etiology, detection and diagnosis, classification, principles of treatment, and results and prognosis for each cancer site discussed.

The guidelines are not standards of care, but instead incorporate the most current experience on optimal care for the cancers most frequently encountered. They offer suggestions and considerations that may be taken into account in the management of cancers in these sites. Each patient's management program should be individualized according to the patient's age, performance status, disease stage, cancer cell type, and other appropriate considerations. By increasing the awareness of these cancers among physicians in Texas, it is hoped that these guidelines will assist in earlier diagnosis and help to reduce the burden of cancer in Texas.

Staff support for this project was provided by The University of Texas System Cancer Center—M.D. Anderson Hospital and Tumor Institute, Houston, under contract with the Texas Cancer Council. The staff director was Joseph T. Painter, MD. Staff members who assisted the workgroups in developing these documents include Stephanie Dubinsky, MPH, Catherine Edwards, PhD, Owen McCrory, MA, Kathleen Pfalzgraf, DrPH, and Mark Stine, MPH. Editorial assistance was provided by Susan Wilkinson, MA.

Funding for publication of this report was provided jointly by the Texas Cancer Council and the American Cancer Society—Texas Division; and production and in-kind services were provided by the Texas Medical Association.

Permissions to reproduce previously published materials were granted by *Chest* for the graph on page 75; and from the American Cancer Society for the illustration from *Clinical Oncology* by Rubin, on page 86.

Head and neck cancer

Head and Neck Oncology Workgroup
Helmuth Goepfert, MD, Chairman
Jerry L. Barker, MD; Lanny G. Close, MD; Aly H. El-Domeiri, MD; Daniel E. Epley, MD; John F. Helfrick, DDS; W. Ki Hong, MD; Daniel E. Lehane, MD; George David Neal, MD; John C. O'Brien, Jr, MD; John J. Senyszyn, MD; Robert M. Steckler, MD; Dan Von Hoff, MD

Contents

4 INTRODUCTION

4 PART ONE: HEAD AND NECK CANCER SITES
4 Cancer of the Oral Cavity
5 CANCER OF THE LIP
5 CANCER OF THE TONGUE
6 CANCER OF THE FLOOR OF MOUTH
7 Cancer of the Pharynx
7 CANCER OF THE NASOPHARYNX
8 CANCER OF THE OROPHARYNX
9 CANCER OF THE HYPOPHARYNX AND CERVICAL ESOPHAGUS
9 Cancer of the Larynx
10 Tumors of the Salivary Glands
12 Cancer of the Thyroid
13 Neck Masses

15 PART TWO: CHEMOTHERAPY OF HEAD AND NECK CANCER
16 SELECTED REFERENCES

INTRODUCTION

Head and neck cancers account for a relatively small proportion of malignancies (2% to 5%). Approximately 45,000 new cases are diagnosed in the United States per year. The exact incidence of head and neck cancer in the state of Texas is not known. The larynx is the most frequent site of cancer in the upper aerodigestive tract.

Cancers of the upper aerodigestive tract share certain epidemiologic and etiologic characteristics. Excluding carcinoma of the nasopharynx, the cancers in this area have as a common etiologic factor the use of tobacco products (snuff, chewing tobacco, cigarettes, cigars, and pipes) and alcohol. In most sites, these two factors are synergistic. The majority of patients with cancer of the upper aerodigestive tract are men in the fifth and sixth decades of life with a history of tobacco use (smoking and smokeless) for many years. Increasing numbers of cases of cancer of the upper aerodigestive tract are being diagnosed in women, and there is an increasing incidence of cancer of the tongue in nonsmoking, nondrinking young adults.

The adequate treatment of head and neck cancer requires specialized training and abilities. Most patients will benefit from a multidisciplinary evaluation and a treatment team that will allow for the best chance of cure and the most rapid rehabilitation. Patients that will be subjected to radiation therapy require a full dental evaluation. The members of the rehabilitation team, including prosthodontists and speech pathologists, will have the most impact on the result of treatment if the patient is evaluated before any surgical action is taken.

PART ONE: HEAD AND NECK CANCER SITES

Cancer of the oral cavity

INTRODUCTION

The frequent sites of cancer in the oral cavity include the lip, the floor of the mouth, and the tongue. The majority of carcinomas in this area are of squamous cell variety; in general, the stage of cancer at the time of diagnosis influences the prognosis. For this reason, early diagnosis is important, especially for high-risk individuals.

Successful treatment of oral cancer depends to a great degree upon an early diagnosis. When oral examinations are performed for the screening of cancer, specific attention must be paid to the areas of highest incidence. This begins with the evaluation of the vermilion of the lips. Any area of chronic ulceration and/or frank induration should be biopsied. Mucosal areas exhibiting atrophic changes or hyperkeratosis (leukoplakia or white spots) should be followed at intervals of no greater than six months.

The oral areas of greatest concern are those in which the alcohol and tobacco products pool. This includes a horseshoe-shaped area involving the retromolar trigone, the floor of the mouth, lateral and ventral aspects of the tongue, and the anterior floor of the mouth. Other regions such as the soft palate, oropharyngeal walls, and the buccal mucosa should also be examined, and it is important to retract and move the tongue to visualize the regions of greatest concern. The hard palate is a relatively infrequent site of squamous cell carcinoma.

Squamous cell carcinoma appears clinically as an exophytic, red, granular and often ulcerated and indurated lesion. Tumors originating from minor salivary glands may be noticed as exophytic but usually are submucosal and located on the palate, tongue base, or the labial mucosa. Early lesions present as white spots (leukoplakia) or more commonly as red areas (erythroplakia). These red speckled areas must be biopsied, for they most often represent carcinoma in situ or cancer with microinvasion.

When an abnormal lesion has been identified, the first responsibility is an appropriate visual and clinical examination of the mucosa of the upper aerodigestive tract and a complete head and neck examination, including careful palpation of the lymph nodes in the neck. This should be done prior to any biopsy. Performance of a biopsy is often associated with inflammation and may cause lymph node enlargement which cannot be differentiated from the enlargement caused by metastatic cancer.

The biopsy of a suspicious lesion is generally performed

with either topical or local infiltrating anesthesia. It is recommended that anesthetic be injected peripherally and not directly into the lesion. An incisional biopsy or cup biopsy is most appropriately performed at the edge or border of the lesion, including a section of the area of transition from normal to abnormal tissue. The specimen is placed in formalin solution, and the appropriate history and clinical findings should be provided to the pathologist. Although sutures may be necessary for hemostasis, this should be discouraged; minor bleeding can be controlled with silver nitrate or electrocautery. If the lesion has an obvious malignant appearance, it may be wise to refer the patient to the specialist who will do the definitive care; this allows the opportunity for proper assessment and staging prior to any biopsy. In fact, the surgeon may defer the biopsy of an obviously malignant lesion until the time of definitive surgery. At such time, a small specimen can be obtained and evaluated by frozen section examination.

About 10% of patients with cancer of the oral cavity or of the upper aerodigestive tract, excluding the nasopharynx, will present with two simultaneous primary cancers. Under most circumstances, the clinical examination of the upper aerodigestive tract and the chest x-ray will suffice for the detection of the second primary. Occasionally, a barium swallow may be indicated. In general, the use of the triple endoscopy or panendoscopy is not necessary as a staging procedure for carcinomas of the upper aerodigestive tract, if adequate documentation can be obtained by less invasive means.

Smoking cessation will diminish the incidence of subsequent second primary tumors. It has been shown that up to 33% of patients treated successfully for cancer of the upper aerodigestive tract will develop second primary tumors within this area, the lung, or the esophagus.

CANCER OF THE LIP

Introduction

The majority of lip cancers are squamous cell carcinomas and arise predominately in the lower lip. At this site, heavy sun exposure and smoking have been found to be common etiologic factors. The cancer is more prevalent among people of fair, freckled complexion.

Carcinoma of the lip presents as an ulcerated, indurated area or a persistent sore at the level of the mucocutaneous junction. The majority of lip carcinomas are diagnosed relatively early, and lymph node metastases are infrequent.

Detection and diagnosis

Any ulcerated and indurated area of the lip which persists beyond two weeks should be investigated. The amount of induration and functional impairment of the lip should be examined. Sensory impairment of the mental nerves can occur, especially in larger lesions; 2% to 5% of lip cancers have a propensity to spread along the perineural spaces of the mental nerves. Lymph node metastases are rare and will primarily involve the nodes in the submental and submandibular regions. The diagnosis of the lip cancer can be confirmed by biopsy, and in small lesions this can consist of an excisional biopsy of the whole lesion. When this excision includes the whole extent of the lesion, such a procedure is curative.

Classification

The staging of lip cancer is done according to the American Joint Committee on Cancer (AJC) criteria. Work-up for distant metastasis is not recommended, for this occurs very infrequently.

Principles of treatment

In general terms, surgery and radiation therapy are equally effective in managing lip cancer. In Texas, with its heavy sun exposure, surgical treatment is the preferred approach to lip cancer. The use of frozen section evaluation of the resected specimen is mandatory for appropriate excision. Guidelines for repair of the surgical defect are found in the appropriate literature. Elective treatment to regional lymph nodes is not necessary except for very large primary tumors and those with mental nerve involvement. After adequate therapy of lip cancer, the patient should be informed of the risk factors, and the pernicious influence of ultraviolet irradiation on the exposed skin should be stressed.

Results and prognosis

Early lip cancer has an excellent prognosis. Recurrence after adequate treatment, the presence of perineural extension, and the development of the disease in regional lymph nodes are indications of a more aggressive behavior and demand more aggressive treatment. Occasionally combined therapy is necessary. Recurrence after radiation therapy should be treated by surgery. In general, a recurrence after seemingly adequate treatment demands referral to a cancer center.

CANCER OF THE TONGUE

Introduction

The tongue is divided into two portions, the anterior two thirds, or oral tongue, and the posterior third, base of tongue or pharyngeal tongue. The demarcation between both is the line of the circumvallate papillae. Squamous cell carcinoma is the most frequent histologic type of cancer of both the oral and the pharyngeal tongue. Non-Hodgkin's lymphoma and salivary gland tumors can also arise in the base of the tongue.

Epidemiology and etiology

The consumption of alcohol and use of tobacco products in the form of cigarettes, cigars, and pipes are common etiologic factors in oral tongue cancer. The erosive form of lichen planus of long-standing duration may also result in the development of tongue cancer. There appears to be an increase of tongue cancer in young adults in the third and fourth decade of life who have none of the known etiologic and risk factors. Poor oral hygiene is considered to be a risk factor of relatively minor importance.

Detection and diagnosis

In the majority of cases, tongue cancer presents as an ulceration which progresses gradually in size and produces induration and impairment of function. On other occasions it may

present as an exophytic wart-like lesion which progressively enlarges and causes impairment of function. Any ulceration, induration, or excrescence of the tongue which persists longer than two weeks should arouse suspicion and call for investigation. The general guidelines for early diagnosis of oral cavity cancer apply to this area. A thorough physical examination of the oral cavity, the head and neck in general, and the neck in particular, is important as the first diagnostic step. Inspection and palpation of the organ will give the appropriate size and site of the lesion. Careful palpation of the neck in search of lymph nodes is mandatory. The lymph nodes most frequently involved are in the upper and mid-portion of the jugular chain and the submandibular triangle. Once the extent of the local tumor and the regional lymph node involvement have been established, a biopsy of the primary site should be obtained. In general, a punch biopsy is recommended. Once the diagnosis has been established, the patient should be referred for appropriate therapy. A diagnostic search for distant metastasis is seldom warranted except for those patients who have advanced stage cancer.

Classification

The staging of tongue cancer is done according to the AJC guidelines. The clinical extent of local and regional disease, and in certain circumstances the histologic grading of the squamous carcinoma, bear on prognosis. As in other cancers of the upper aerodigestive tract, the clinical documentation of the tumor at the primary site and the regional lymph nodes will determine the extent of disease and allow the selection of the most appropriate treatment.

Principles of treatment

Early carcinomas of the tongue can be treated successfully by either radiation therapy or surgery alone. Total surgical excision of the primary tumor is mandatory, and frozen section control of the excision is indispensable. The elective treatment of the clinically negative lymph nodes in the neck is recommended for any lesion staged as a T2 or larger. The use of elective neck dissection or elective radiation therapy in early tongue cancer should be individualized and will be influenced by the experience and preference of the treatment team. The rehabilitation of the patient following treatment will depend upon the extent of tissue loss and the severity of reaction from treatment. If a major glossectomy is necessary, there will be a need for rehabilitation of deglutition. Major tongue loss may require the use of a prosthesis to facilitate deglutition and allow speech intelligibility.

Whenever there is abundant connective tissue invasion or a large primary tumor, and especially when there is extracapsular extension of cancer in the lymph nodes, combined treatment with surgery and radiation therapy is advisable.

The use of neo-adjuvant or front-end chemotherapy is still in an investigational stage, and this use should be monitored by centers with established protocols.

Results and prognosis

Early cancer of the tongue, especially of the well-differentiated variety, offers an excellent prognosis. The presence of poorly differentiated tumors in the young adult has an ominous prognosis. The presence of lymph node metastasis, especially when multiple or large with extra-capsular extension, is fraught with high mortality. Patients with advanced staged disease will have only a 20%, two-year survival. Patients who have undergone successful treatment for tongue cancer should be aware of the possibility of developing other primary tumors. The follow-up after treatment of patients with head and neck cancer should concentrate on the search for possible recurrence or metastasis as well as for second primaries. The patient should be checked every three to four months for the first two years and every six months for the next three years. Thereafter we advise yearly follow-up. Eighty to 90% of recurrences of upper aerodigestive cancer will occur during the first 24 months. Second primaries usually become clinically apparent after this time. The follow-up of these patients should be geared towards the search for such tumors, and every practitioner has an important responsibility in the prevention and early diagnosis of these cancers. Tumors recurrent after radiotherapy may be amenable to surgical salvage. Recurrences after surgery usually call for combined treatment.

CANCER OF THE FLOOR OF MOUTH

Introduction

Generally speaking, the principles enumerated for tongue cancer apply for the floor of the mouth area; the proximity of the mandible and the potential of this structure to be invaded by cancer compound the treatment decisions.

The epidemiology and etiology parallel oral tongue cancer. Most of the time, patients with floor of mouth cancer have a long-standing history of cigarette smoking. The consumption of alcohol is an added etiologic factor. Poor oral hygiene is frequently encountered in these patients.

Detection and diagnosis

The majority of floor of mouth cancers will develop close to the midline, under the tongue. Persistent ulceration with induration is the common finding. The physical examination by inspection and palpation should establish the relation between the lesion and the mandible. Not infrequently, there is fixation to this organ, and clinical invasion of the mandible is suspect. Palpation will determine the three-dimensional extension of the cancer and possible invasion into the tongue muscles. Bimanual palpation will determine the thickness of the lesion. The presence of teeth and their health should be determined. Careful palpation of the neck for nodes in submental, submandibular, and jugular areas should be performed. The anterior floor of the mouth is a midline structure, and lymphatic spread can occur to both sides of the neck. This has therapeutic and prognostic implications. Radiographic investigation of the mandible is mandatory prior to embarking on definitive treatment. A small punch biopsy of the edge of the lesion done under topical or local infiltrating anesthesia will suffice to ascertain the histologic diagnosis. This is recommended for any ulcer or ulcerative-infiltrating lesion on the floor of mouth which persists beyond three weeks. The search for distant metastasis is not warranted, and the physical examination of the upper aero-

digestive tract and a chest x-ray suffice for the search for possible simultaneous primaries. Triple endoscopy or panendoscopy is usually not necessary.

Classification
Staging of cancer at this site follows the AJC guidelines. The majority of tumors at this site are squamous cell carcinomas; occasionally a salivary gland carcinoma originating from the sublingual gland will be discovered.

Principles of treatment
For early cancers, radiation therapy and surgery are effective modalities of treatment. If surgery is decided upon, total excision of the tumor is mandatory, and the use of frozen section examination at the time of excision is recommended. Whenever the tumor attaches to the mandible or involves periosteum, adequate bone resection is indicated. The extent of such bone resection varies from marginal (coronal resection) to segmental resection of a portion of involved mandible. The repair of the defect can be accomplished by multiple means (primary closure, skin graft, flaps, etc). Treatment and rehabilitation of these patients should be done by the appropriate team.

For advanced lesions, especially those with multiple lymph node involvement and/or presence of cancer growth outside of the lymph node capsule, combined treatment with surgery and radiation therapy is recommended. Rehabilitation of speech and prosthetic dental rehabilitation is often necessary.

The use of chemotherapy as a first line of treatment remains investigational.

An attempt should be made to change the patient's habits and urge cessation of smoking. This will improve oral hygiene, diminish the incidence of sequelae of treatment, and reduce the possibility of second primary tumors.

Results and prognosis
Early cancers of the floor of mouth without lymph node invasion have an excellent prognosis following appropriate therapy. Large infiltrating tumors and the presence of lymph node metastasis in the neck influence prognosis. The failure at the primary site and in the lymph nodes will usually become obvious within two years of treatment. Distant metastases seldom develop, but second primaries will appear at the rate of approximately 5% per year, especially in those patients who continue to smoke.

Cancer of the pharynx

INTRODUCTION
The pharynx is divided into three subsites: the nasopharynx, the oropharynx, and the hypopharynx. Cancers of the oropharynx and hypopharynx share common epidemiologic and etiologic factors. As in the oral cavity, the use of all tobacco products and the excessive consumption of alcohol are common to the etiology of cancers in these sites.

CANCER OF THE NASOPHARYNX

Introduction
Cancer of the nasopharynx is unique in its epidemiology and etiology. The nasopharynx is a relatively infrequent site for cancer in this country; in some areas of the world, it is the most frequent site for head and neck carcinoma.

Epidemiology and etiology
Epstein-Barr (EB) virus, genetic predisposition, and environmental factors have been identified as possible cocarcinogenetic elements in nasopharyngeal carcinoma. In the United States, the high-risk group is difficult to identify; but this disease is definitely more prevalent among those of Chinese descent. Cigarette smoking has only been associated with well-differentiated squamous carcinoma. The World Health Organization has recognized three types of nasopharyngeal carcinoma. Type 1 is the well-differentiated variety; types 2 and 3 have been shown to have an associated positive EB viral serology.

Detection and diagnosis
The nasopharynx is an area where the cancer can remain silent for an extended period of time, and the patient may have as the first symptom an enlarged lymph node about the upper portion of the neck. A persistent serous otitis media (especially when unilateral), nasal blockage, bloody nasal drainage, and progressive headaches are symptoms that should alert the physician to a possible carcinoma of the nasopharynx. More advanced cancers will grow intracranially, involve the nerves about the cavernous sinus, extend into the parapharyngeal space, and involve the lower cranial nerves. The physical examination by direct or indirect nasopharyngoscopy will often identify a mass in the nasopharynx.

Frequently there will be an enlarged lymph node in the upper portion of the posterior triangle of the neck. Over three fourths of patients with carcinoma of the nasopharynx will have lymph node involvement at the time of diagnosis. Diagnostic procedures to confirm the extent of the tumor include polytomography of the nasopharynx and especially CT scanning of the area. It is recommended that the CT scanning be extended from the base of the skull down to the thoracic inlet. This will allow for documentation of extension of the primary tumor and detection and determination of lymph node involvement in areas difficult to examine. Biopsy of the primary tumor site can be done under local anesthesia under direct vision or with the help of a nasopharyngoscope, but most frequently it requires a general anesthetic. It is advisable for a patient suspected of having carcinoma of the nasopharynx to be referred to a multidisciplinary treatment team.

Additional studies include chest x-ray; for those patients with high stage lymph node disease, the search for possible distant metastasis is recommended. Carcinoma of the nasopharynx of poorly differentiated or of lymphoepithelioma varieties has a predilection for bone metastasis. Such metastases are seldom present on initial examination but may occur after successful treatment.

Principles of treatment
Carcinoma of the nasopharynx is best treated by radiation therapy. Prior to treatment, the patient should have a careful dental evaluation for restoration purposes and possible extraction of decayed and unhealthy teeth. It is recommended that patients undergo a pretreatment evaluation of their paranasal sinuses and their hearing, and a baseline study of pituitary function should be performed.

The extent of local disease at the primary site and the extent and distribution of lymph node metastasis will influence treatment planning.

Patients with large lymph nodes, especially about the lower portion of the neck, have a high propensity for distant metastasis. It is recommended that such patients be evaluated for possible adjuvant chemotherapy under approved protocols. Radiotherapy is adequate treatment for neck metastasis, and neck dissection for residual disease is seldom necessary. Follow-up examination should be directed to the primary site, the regional lymph nodes and any possible distant metastasis, especially in bone and lungs.

Possible sequelae of treatment include pituitary dysfunction, persistent serous otitis media, and those sequelae resulting from diminished salivary flow, especially about the oral cavity and teeth. All patients receiving radiotherapy for head and neck cancer should be followed regularly by their dentists, and caries prevention by fluoride application and aggressive dental hygiene is mandatory.

Results and prognosis
Patients with poorly differentiated carcinoma of the nasopharynx and early lymph node stage have a better than 70% chance of five-year survival. The presence of large, multiple lymph nodes, especially about the lower portion of the neck, is a harbinger of poor prognosis. Late recurrence or metastasis can be found in carcinoma of the nasopharynx. Patients should be followed not only for the possibility of recurrent and metastatic disease but also for possible sequelae of treatment. Second primary cancers are most unusual.

CANCER OF THE OROPHARYNX

Introduction
The oropharynx encompasses the following areas: faucial arch and soft palate, tonsil, base of tongue, and oropharyngeal wall. Most cancers in the area are of squamous cell variety. Lymphomas may arise in the base of tongue area and tonsillar fossa. Squamous cell carcinoma of the tonsil of undifferentiated or poorly differentiated variety shares some common characteristics with carcinoma of the nasopharynx of the same histological grouping. Cancers of the oropharynx, especially in the base of tongue and tonsillar fossa, can be relatively asymptomatic at the primary site and present to the physician with an enlarged lymph node as the first symptom. The reader is referred to the section "Neck Masses," subsection "Diagnosis," for further details on the subject.

Detection and diagnosis
Primary cancers of the site may go unnoticed until lymph node metastases develop. Patients frequently complain of a persistent sore throat or ear pain; when the tumor advances, deglutition may become impaired and voice changes can occur. Large masses in the area of the base of tongue produce some typical voice changes ("hot potato" voice). Trismus may be present.

Some of these lesions can be detected by simple physical examination, but most patients with cancer of the oropharynx should be referred for appropriate investigation. If the lesions are amenable to simple, direct inspection, biopsy should be performed under topical or local anesthesia. A punch specimen of the lesion, preferably of its edge, will suffice for histologic diagnosis. Appropriate examination of the lesion can be done under most circumstances by inspection and palpation. Occasionally such procedure will require the use of local anesthesia under sedation.

The depth of the cancer and the involvement of adjacent structures must be delineated by physical examination and the appropriate radiographic studies. The latter include soft tissue x-rays of the area and, when indicated, the use of computed tomography. The presence of regional lymph node metastasis about the upper and midjugular chain and the posterior triangle of the neck should be determined through physical examination. If a patient presents with multiple lymph node metastasis or massively enlarged lymph nodes, the investigation of distant metastasis, especially in the lung, is warranted. Second primaries are diagnosed in about 16% of patients with carcinoma of the oropharynx at the time of initial diagnosis. For that reason, a thorough examination under anesthesia including direct laryngoscopy and esophagoscopy should be considered. Patients who undergo successful treatment for cancer in this area have one chance in three to develop a second primary cancer during the follow-up years.

Classification
Carcinomas of the palate and faucial arch are usually squamous cell in histology; often there is associated carcinoma in situ covering a good portion of the adjacent soft palate, especially in heavy smokers. Carcinomas of the base of tongue and of the tonsil can be of poorly differentiated or undifferentiated variety, and non-Hodgkin's lymphoma can arise at these sites. Salivary gland tumors, especially mucoepidermoid carcinomas, adenocarcinomas, and adenocystic carcinomas may occasionally be encountered in these areas. Staging follows the AJC recommendations.

Principles of treatment
Control of cancer and preservation of optimum functions are important. All patients should be seen by a treatment team for the best result and most expeditious rehabilitation. Most early squamous cell cancers are best managed by radiation therapy, as this treatment gives excellent local tumor control (better than 80% for T1 and T2 lesions). The use of surgery for early lesions should be limited to those cases where a good functional result can be obtained. The treatment for advanced cancers must be individualized depending upon the site of the tumor and its extent. Frequently, the presence of lymph node metastases and their location will dictate the treatment

modality to be followed.

The histologic grading of the tumor and the pattern of local invasion will determine the choice of treatment to be used. Multiple surgical procedures are available to treat cancer in this area, and the appropriate reconstruction must be chosen depending upon patient factors, tumor factors, and the experience of the treatment team. Multidisciplinary treatment is encouraged for patients with advanced stage disease. The use of chemotherapy as the first line of treatment should be under appropriate protocols.

It is important to advise patients of the role of smoking in the development of second primaries and in the pathogenesis of complications and sequelae of treatment. If therapy fails, it will usually occur within two years; salvage surgery is sometimes successful. Patients with advanced disease and recurrent disease should be referred for possible investigational therapy.

Staging and appropriate therapy is recommended for lymphomas. This subject is not covered in these guidelines. Surgical excision with or without postoperative radiotherapy is advised for salivary gland tumors.

Results and prognosis

The prognosis of squamous cell cancer is directly related to the staging of the primary tumor and the presence of lymph node metastasis. Advanced stage cancer and massive lymph node metastases herald poor prognosis. Treatment failure most often occurs at the primary site and in the regional lymph nodes. Distant metastases occur primarily in the lung but may be found in the liver and bone as well. Patients who survive beyond two years should be observed for possible second primaries in the lung and esophagus or in the head and neck area, especially if patients continue to smoke.

Adjuvant chemotherapy and measures to decrease the risk of second primaries are being addressed by appropriate research protocols, and patients should be considered for referral to centers involved in such research.

CANCER OF THE HYPOPHARYNX AND CERVICAL ESOPHAGUS

Introduction

This site encompasses the pyriform sinuses, the postcricoid area, and the cervical esophagus. It includes a portion of the posterior pharyngeal wall caudal to the level of the tip of the epiglottis. Cancers about this site are usually squamous cell carcinomas.

Detection and diagnosis

A persistent sore throat and progressive difficulty in deglutition are characteristics of cancers in this area. Referred otalgia, food aspiration, and hemoptysis may occur. Voice changes will come about when laryngeal function is impaired. Up to two thirds of carcinomas of the pyriform sinus will have palpable lymph node metastasis upon admission, and occasionally this sign or physical finding will be the reason for consultation with the physician. In this country, the majority of carcinomas of the hypopharynx arise within the pyriform fossae or sinuses and originate at the most inferior extent or apex of this structure. Unfortunately, most patients with cancer in this area are unaware of the very early symptoms of disease, and it is seldom possible to provide a treatment that will preserve laryngeal function, either by laryngeal conservation surgery or by radiation therapy.

Most patients in whom cancer in this area is suspected should be referred for appropriate investigation and adequate radiographic documentation of the extent of disease. Appropriate radiographic studies include barium swallow, laryngogram and, depending upon circumstances, computerized tomography.

Pyriform sinus carcinomas have a relatively poor prognosis because of early metastatic spread and propensity to local failure in the head and neck area after seemingly appropriate therapy. The general principles of diagnosis for carcinoma of the oropharynx apply to this site.

Classification

Carcinomas at this site are grouped into hypopharyngeal wall, pyriform sinus, postcricoid area, and cervical esophagus. The majority are squamous cell carcinomas, and the staging follows the recommendations of AJC.

Principles of treatment

Unfortunately, the majority of patients will have advanced primary tumors. Less than 5% of patients can be treated by either conservation surgery or radiation therapy with the aim of preserving laryngeal function. Seventy-five percent of the patients have clinically positive nodes on admission. Radiation therapy can be used for patients with T2 or with selected T3 tumors.

The majority of patients will require surgery, and most of the time this requires total laryngectomy and neck dissection. Not infrequently, the circumferential pharyngeal mucosa must be removed; reconstructive procedures are required to reestablish continuity of the alimentary tract. The selection of repair is a matter of preference and experience of the treatment team. The majority of patients will require planned postoperative radiation therapy.

Many patients succumb to distant metastasis or to other causes during the follow-up. Second primaries do occur in this high-risk population.

Chemotherapy as the first line of treatment should be considered only under appropriate protocols.

Results and prognosis

Less than 50% of patients with carcinoma of the hypopharynx will survive three years. Thirty-five percent may survive five years. The prognosis is influenced by the staging at the primary site and the presence and staging of lymph node metastasis. Distant metastases occur primarily in the lung. Carcinoma of the pyriform sinus remains one of the most challenging tumors for the head and neck oncologic team.

Cancer of the larynx

INTRODUCTION

Squamous carcinoma of the larynx is the most frequent cancer of the upper aerodigestive tract. The two principal goals in the

therapy of cancer of the larynx are eradication of the cancer and preservation of optimum function. If the therapy of laryngeal cancer calls for the removal of the organ by total laryngectomy, every effort should be made to achieve the best possible phonatory rehabilitation. The treatment of cancer should be tailored to the individual patient and his or her cancer. Early diagnosis is important.

If maximum benefit is to be derived from the selection of primary treatment, the physician should be aware of the indications and contraindications of each treatment modality.

EPIDEMIOLOGY AND ETIOLOGY

Cigarette smoking is strongly associated with cancer of the larynx. Patients with laryngeal cancer usually have a long-standing history of tobacco product abuse, and a good number of them are heavy drinkers. Nevertheless, squamous cell carcinoma of the larynx can be found among nonsmokers and even in young adults. Most carcinomas of the larynx in the United States are of glottic origin (vocal cords), whereas in other parts of the world the majority of laryngeal cancers are of supraglottic origin (above the vocal cords).

DETECTION AND DIAGNOSIS

The cardinal symptom of carcinoma of the larynx is persistent hoarseness. A patient who has this symptom for over a month should be investigated for the possibility of laryngeal cancer. Other symptoms include odynophagia, dyspnea, progressive stridor, or a node in the neck. An unexplained sore throat lasting longer than three weeks, especially when swallowing and with radiation to the ear (referred otalgia), should be investigated with suspicion, particularly in a heavy smoker. Hemoptysis is seldom reported. Most carcinomas of the larynx can be diagnosed by appropriate examination through indirect (mirror) or direct (fiberoptic flexible scope) examination. If such examination does not give a satisfactory explanation for the patient's symptoms, a direct examination under anesthesia is indicated.

The extent of the tumor, infiltration of local structures, and impairment of laryngeal mobility should be documented through appropriate visual inspection and radiographic studies (high resolution CT scanning, laryngogram, polytomogram). The exact choice of the radiographic study will depend upon tumor location and extent, and the preference of the treating physicians. CT scans are usually nonrevealing in T1 lesions.

Physical examination of the regional lymph nodes is important, especially in carcinomas of supraglottic laryngeal origin, because about half of the patients will have palpable lymph node metastasis at the time of diagnosis. The documentation of the location and the extent of metastasis is important in the treatment planning. If partial laryngeal surgery is contemplated, the patient should have a thorough evaluation of cardiopulmonary status. A chest X-ray is recommended to detect possible concomitant second primaries in the lung. Work-up for distant metastasis is not warranted, except when dealing with recurrent carcinoma.

CLASSIFICATION

Carcinomas of the larynx are subdivided into those of glottic and supraglottic origin. Subglottic carcinoma is extremely rare. Within each of these sites the tumor-node-metastasis (TNM) staging follows the recommendations of the AJC.

The majority of cancers of the larynx are squamous cell carcinomas and histologic varieties thereof. Lymph node metastasis for supraglottic cancer is most likely in the upper and midjugular area and, for advanced glottic cancer with subglottic extension, in the paratracheal and pretracheal area. Salivary gland cancers and sarcomas of soft tissues and of cartilage occur rarely in this organ.

PRINCIPLES OF TREATMENT

For early laryngeal cancer, both radiotherapy and conservation surgery offer equal results as far as cancer eradication at the primary site is concerned. For the majority of early laryngeal cancers, radiation therapy has the advantage of leaving a nearly normal voice at the completion of treatment. Conservation surgery is an important option, and the final decision rests with the individual treatment team.

In supraglottic laryngeal cancer, it is important to treat the neck either electively in the absence of palpable enlarged lymph nodes or by the appropriate neck dissection in the case of palpable nodal disease. Age of the patient, pulmonary function, presence of associated pathology, location of the tumor, and the wishes and desires of the patient should be respected over and above the individual preferences of the different specialists who treat carcinoma of the larynx.

The use of carbon dioxide laser in the treatment of early laryngeal cancer may be acceptable in selected instances.

The use of adjuvant chemotherapy in the early management of carcinoma of the larynx is still experimental. Protocols are available addressing the possible benefit of chemotherapy in downstaging advanced disease and rendering a cancer treatable by means of either conservation surgery or radiation therapy, following substantial tumor remission by induction chemotherapy.

Recurrent disease after radiation therapy can often be salvaged by surgery, and partial laryngeal surgery is still feasible in selected recurrent glottic carcinomas.

RESULTS AND PROGNOSIS

Early localized carcinoma of the larynx (T1 and T2) is curable by single modality of treatment in over 85% of cases. Advanced lesions will often require combined treatment, and such treatment should be individualized. The results of treatment for advanced carcinoma of the larynx, especially when accompanied by massive lymph node disease in the neck, is less favorable. Most local failures will occur within two years after definitive treatment. Lung metastasis can occur at a later time, and patients who have been successfully treated for carcinoma of the larynx have an increased risk of developing secondary lung cancer. Recurrences after radiotherapy may be amenable to partial laryngectomy.

Tumors of the salivary glands

INTRODUCTION

Cancer of the salivary glands can occur in any of the major

salivary glands (parotid, submandibular, sublingual) and in any of the intra- or submucosal salivary glands distributed throughout the upper aerodigestive tract. It is an accepted general rule that most tumors of the major salivary glands, especially the parotid and submandibular glands, are benign; but that tumors of sublingual or of minor salivary gland origin are more frequently malignant. In the parotid gland, approximately two thirds to three fourths of tumors are of benign origin; in the submandibular gland, half of the tumors are benign. In minor salivary glands, the proportion of benign and malignant tumors is influenced by site. On the hard palate, salivary gland tumors are often of benign origin; in other locations of the upper aerodigestive tract, salivary gland tumors are more likely malignant.

Overall, the prognosis for salivary gland neoplasms depends upon the histologic type, the site and local extension of the tumor, and the modality of spread of cancers (lymphatic, perineural). Although tumors of the salivary glands comprise less than 3% of neoplasms in the head and neck region, their histologic varieties and the regional anatomic relationships make their management interesting and challenging.

EPIDEMIOLOGY

There is no particular high-risk group identified in relation to salivary gland neoplasms. A history of prior radiation therapy for benign conditions of the head and neck has been associated with an increased incidence of major salivary gland neoplasms. No other environmental factor or genetic predisposition has consistently related to salivary gland neoplasms.

DETECTION AND DIAGNOSIS

In the major salivary glands, a slowly enlarging mass, most often painless, is the cardinal symptom of a benign or malignant tumor. The presence of symptoms of nerve infiltration (the facial nerve in the case of the parotid gland, lingual nerve and hypoglossal nerve in the case of the submandibular gland) are indications of advanced disease and portend malignant behavior. The location of the mass, fixation to surrounding structures and to the skin, and the presence of paralysis or sensory deficit of the regional nerves should be investigated. Ten percent of carotid tumors originate in the deep lobe and will present as a parapharyngeal or soft palate mass. The lymph nodes at the sentinel sites of drainage for the given area should be carefully palpated for the possibility of metastasis. Such spread is more frequent in malignant tumors of minor salivary gland origin. In the mucosa of the upper aerodigestive tract, a tumor of minor salivary gland origin will usually present as a submucosal fullness or mass. Ulceration is only a late manifestation of cancer, when it has broken through the overlying mucosa or a biopsy has been performed.

Salivary gland tumors may be found in children, and the most frequent malignant variety is mucoepidermoid carcinoma.

Ancillary diagnostic procedures such as CT scanning and fine needle aspiration biopsy should be used judiciously, depending upon the primary site of the tumor and in accordance with the therapeutic plan. In the parotid gland, such diagnostic procedures are seldom indicated.

Nevertheless, in the paranasal sinuses, once the histologic diagnosis of malignant salivary gland tumor has been obtained, appropriate radiographic investigation of the extent of disease and local invasion is mandatory before embarking on definitive treatment.

Distant metastases are seldom present at the time of initial diagnosis but may be present in recurrent malignant tumors. Within the parotid gland, the differential diagnosis of any mass should include possible lymph node metastasis from a primary tumor of the skin of the face and scalp (melanoma, squamous cell carcinoma).

CLASSIFICATION

Most benign tumors of salivary glands are pleomorphic adenomas or mixed tumors. For other histologies of benign nature, the reader is referred to specific references. In general, malignant tumors are classified as adenocarcinomas, mucoepidermoid carcinomas, and adenocystic carcinomas with their varieties of high grade and low grade. Some cancers have intermediate histologic grades, notably the mucoepidermoid carcinomas. Depending upon the location of carcinomas, the histological grading bears on prognosis.

Tumors of the salivary gland are staged according to the AJC classification.

PRINCIPLES OF TREATMENT

The mainstay of therapy for benign tumors of salivary gland origin is adequate surgical excision. In the case of the parotid gland, superficial parotidectomy is the most appropriate treatment for tumors in the location superficial to the facial nerve. A cuff of normal tissue should surround the "pseudocapsule" of the tumor. Piecemeal removal or "shell-out" of benign mixed tumors is considered inadequate because of the possibility for local recurrences. For the management of salivary gland tumors to be effective, the presence of an experienced pathologist is indispensable for frozen section examination. This will allow for immediate definitive surgery. Malignant salivary gland tumors should be treated by adequate surgery. The indications for nerve removal (facial nerve, lingual nerve, hypoglossal nerve, mandibular nerve, etc) must be individualized.

The use of postoperative radiation therapy is recommended for high-grade tumors, presence of microscopic foci of tumor at the margins, presence of lymph node metastasis, perineural invasion, and after resection of recurrent malignant salivary gland tumors. Treatment should be individualized and left to the discretion and the experience of the treatment team. Depending upon circumstances and the extent of surgery, appropriate rehabilitation measures should be addressed at the time of definitive therapy. Neck dissection is indicated for palpable lymph nodes.

Systemic and regional chemotherapy for malignant salivary gland tumors is still investigational.

The treatment of recurrent salivary gland tumor should be individualized depending upon the pattern of invasion and the histologic type. It is recommended that patients with advanced and recurrent disease be managed by multidisciplinary treatment teams.

RESULTS AND PROGNOSIS

Benign salivary gland tumors have an excellent prognosis. Recurrences are rare and usually can be traced back to an inadequate initial surgical procedure. Combination treatment for malignant salivary gland tumors is very effective in controlling disease at the site of primary tumors, but such combinations should be used judiciously because of potential for treatment sequelae. For most salivary gland carcinomas, the first site of failure is usually at the primary and occasionally at the level of the regional lymph nodes.

Factors that influence the prognosis in salivary gland tumors include the histology and grade, the anatomy at the site of the primary tumor, the size of the cancer, the presence of capsular invasion, the presence of regional lymph node metastasis, local recurrence after adequate treatment, tumor extension beyond the organ, and perineural invasion.

Local recurrence and distant metastasis can develop many years after definitive treatment, and many of the salivary gland carcinomas are known for their very protracted, relentless course. Patients who develop isolated metastasis years after definitive treatment should be considered for "metastasectomy" and for other investigative chemotherapy protocols.

Cancer of the thyroid

INTRODUCTION

The incidence of thyroid carcinoma in the general population is very low. The majority of thyroid cancers follow a rather benign indolent course, and treatment is highly effective. On the other extreme, undifferentiated thyroid cancer is very aggressive, malignant, and often not amenable to curative treatment. There is more controversy regarding the proper diagnostic and therapeutic approach for a palpable nodule in the thyroid gland than there is regarding the steps to be taken when cancer is diagnosed.

EPIDEMIOLOGY

The cause of thyroid cancer is unknown. Evidence suggests that prior radiotherapy about the head and neck, as has been used for benign conditions, may be one of the contributing factors. This is especially true in children and adolescents. The influence of goitrogenic factors in the pathogenesis of thyroid carcinoma has not been clarified. Medullary carcinoma has a genetic predisposition.

DETECTION AND DIAGNOSIS

Most patients with thyroid carcinoma will seek medical attention because of an asymptomatic neck mass. A mass in the thyroid of long-standing duration is the most frequent symptom, but about a fourth of patients will present because of a mass in the lateral portion of the neck, the site of a lymph node metastasis. In the latter situation, the primary tumor may either be unnoticed by the patient or be of a so-called "occult" variety. Not infrequently the thyroid mass is discovered incidentally during a general physical examination. Most patients have no history of pre-existing thyroid nodule or goiter. Usually the more undifferentiated the tumor, the more symptomatic the patient.

Pain is most often present in patients with anaplastic carcinoma, but it is *not* a typical symptom of malignant disease in the thyroid. Nevertheless, inflammatory processes about the thyroid gland and hemorrhage into an adenoma are more frequent causes for thyroid gland pain. A sensation of fullness and pressure associated with a history of a recent increase in the size of a goiter is suggestive of carcinoma. Hoarseness is a symptom of infiltration of recurrent laryngeal nerves. Dysphagia due to infiltration of the esophagus is rare. Dyspnea and stridor may occur as a result of distortion of the airway, invasion by tumor, or paralysis of invaded recurrent laryngeal nerves.

A hormonally active thyroid cancer is rare, and symptoms due to elevation or decrease in thyroid hormone are rare. Pulmonary metastases are occasionally found, and rarely a metastatic follicular thyroid carcinoma will present in the form of a pathologic fracture. Medullary carcinomas can be sporadic or familial and part of a syndrome of multiple endocrine neoplasia.

Proper evaluation of the thyroid gland includes a thorough visual and palpatory examination. The clinical findings in the area of the thyroid and the lymph-node-bearing tissues are of primary importance when deciding on further diagnostic and therapeutic steps. The physical character of the nodule (fixation, hardness, tenderness) is a reliable diagnostic clue of cancer. The age of the patient is important, as young patients (below age 20 years) with a thyroid mass usually have cancer. On the other hand, a hard mass in the thyroid of an older male is usually malignant.

The metastatic spread to regional lymph nodes occurs more often along the arteries supplying the gland. Lymph node metastasis can be found at the carotid bifurcation in the mid- and lower jugular area and in the more medial portion of the posterior triangle.

Diagnostic use of scintigraphic scanning, sonogram, and fine needle aspiration should be left to the discretion of the treatment team. Fine needle aspiration of the thyroid requires the availability of a trained cytologist for adequate interpretation. A scintigram will determine the ability of a nodule to concentrate radioactive material in reference to the surrounding glandular tissue.

A cold nodule will be malignant in up to 20% of cases. Hot nodules are rarely malignant. The sonogram is used to determine the consistency of the nodule and may show pathognomonic calcifications. A cystic structure with a smooth inner lining is more frequently of benign nature.

Pulmonary metastasis can be present at the time of diagnosis in a fourth of the patients with undifferentiated carcinomas. Papillary carcinoma will occasionally present pulmonary metastasis with a very characteristic radiographic appearance and distribution.

Cancer is more frequently present in a thyroid with a single nodule, rather than in a multinodular gland. The diagnosis of cancer is firmly established only by histologic study of the thyroid and the tumor tissue. If the symptoms and findings are suggestive of cancer, an operation is indicated. Because excision of all abnormalities of the thyroid gland is not feasible, patients must be selected carefully for operation. We consider

the minimal operation for the majority of thyroid nodules to be a thyroid lobectomy. Specimens should then be sent for frozen section examination.

CLASSIFICATION
Carcinomas of the thyroid are divided into differentiated (papillary, follicular), medullary, and undifferentiated or anaplastic. Within these groups there are variations, and the fine points of subclassification can be found in the appropriate literature. Papillary carcinoma is the most frequent, and usually it is the one with more benign clinical behavior. Age of the patient, gender, local invasion, and presence of local and distant metastasis are some factors that influence prognosis of thyroid carcinoma.

PRINCIPLES OF TREATMENT
There is much controversy regarding the extent of thyroid gland surgery in differentiated carcinoma. This is especially true when dealing with papillary carcinoma in young adults. The decision to perform a total thyroidectomy has to include consideration of the possible sequelae of treatment, recurrent nerve paralysis and, more importantly, hypoparathyroidism.

Regional lymph node dissection in the form of modified neck dissection is indicated when nodes are enlarged or if metastases are identified at the time of surgery. The extent of thyroidectomy for differentiated carcinoma of the thyroid should be guided by the histology, the degree of local invasion, and the risk factors of the patient. Patients with high risk factors are males over the age of 40 or females over the age of 50 with follicular carcinoma. Patients with low risk factors are males below the age of 40 or females below the age of 50 with any histology. Patients with intermediate risk factors are males over the age of 40 and females over the age of 50 with papillary or mixed carcinoma. These risk factors apply to differentiated carcinomas excluding medullary carcinoma. Total thyroidectomy is recommended for medullary carcinoma.

The same considerations of risk factors will dictate the indications for postoperative therapeutic radioactive iodine treatment. Indications and specific guidelines are beyond the scope of this syllabus. Not every patient with thyroid cancer will need radioactive iodine ablation, nor will every patient benefit from this treatment. In selective instances, external beam radiotherapy may be indicated.

The use of postoperative thyroid suppression is recommended, especially for those varieties of thyroid cancer that may be hormonally dependent (papillary carcinoma and follicular carcinomas). Such treatment serves the double purpose of eliminating the trophic effects of thyroid-stimulating hormone (TSH) upon neoplastic tissue and replacing the function of the ablated thyroid parenchyma.

Thyroid carcinoma, especially of the differentiated variety, is a slow-growing tumor and one that has to be followed for many years. Late recurrences and late metastasis may occur after decades. Specific treatment and follow-up recommendations have to be individualized, depending upon histology, mode of invasion, presence of metastasis, and age and gender of the patient.

RESULTS AND PROGNOSIS
Prognosis and treatment results are very much dependent upon the extent of disease, histological type, presence or absence of lymph node metastasis and the presence or absence of distant metastasis at the time of diagnosis. The general three groups of high risk, medium risk, and low risk have a direct relationship to prognosis for differentiated cancer. Prognosis for other types of cancer varies with histology and extent of cancer.

Neck masses

INTRODUCTION
Any enlarged, firm cervical lymph node in an adult which persists for longer than three weeks and is not associated with an infectious or inflammatory illness is cancerous until proven otherwise. In a child or an adolescent, a persistent neck mass is apt to either be of an inflammatory or congenital nature. Every neck mass should be approached in a systematic fashion, evaluated judiciously, and excised or biopsied only as a last step. Thin needle aspiration biopsy may be appropriate as an initial step.

EPIDEMIOLOGY AND ETIOLOGY
In children and adolescents, the majority of persistent neck masses will be of inflammatory origin, with only 10% malignant. Most malignant tumors in an early age group are of mesenchymal origin (lymphomas and soft tissue sarcomas) (Fig 1). In general, the majority of neck masses of an inflammatory nature have no known specific cause and will be interpreted histologically as nondiagnostic reactive hyperplasia. Specific forms of inflammatory adenitis are sarcoid, tuberculosis and mycosis. About one fifth of patients initially found to have a nonspecific hyperplasia on histologic examination will ultimately prove to have a specific patholoic process.

One eighth of the neck masses represent congenital anomalies. One half of the noninflammatory neck masses are either metastatic cancer or neoplasias of the lymphoreticular system. In approximately two thirds of cases of metastatic cancer, the primary lesion is located in the head and neck area (Fig 2). Excluding metastatic cancers to the supraclavicular areas, most metastatic tumors to cervical lymph nodes arise from primary cancers in the head and neck area and most commonly from the mucosa of the upper aerodigestive tract (Fig 3).

1. Neck masses, children compared with adults.

Type of Mass	Children	Adults
Benign	90%	20%
Common cell type	Mesenchymal (90% benign)	Ectodermal (90% malignant)
Parotid tumors	50% malignant	25% malignant
Thyroid nodule	>10 yrs of age 80% malignant	<20 yrs of age 80% benign
Thyroid malignancy	Better prognosis	Poorer prognosis
Melanoma	60% in head & neck	20% in head & neck

2. Noninflammatory neck masses.

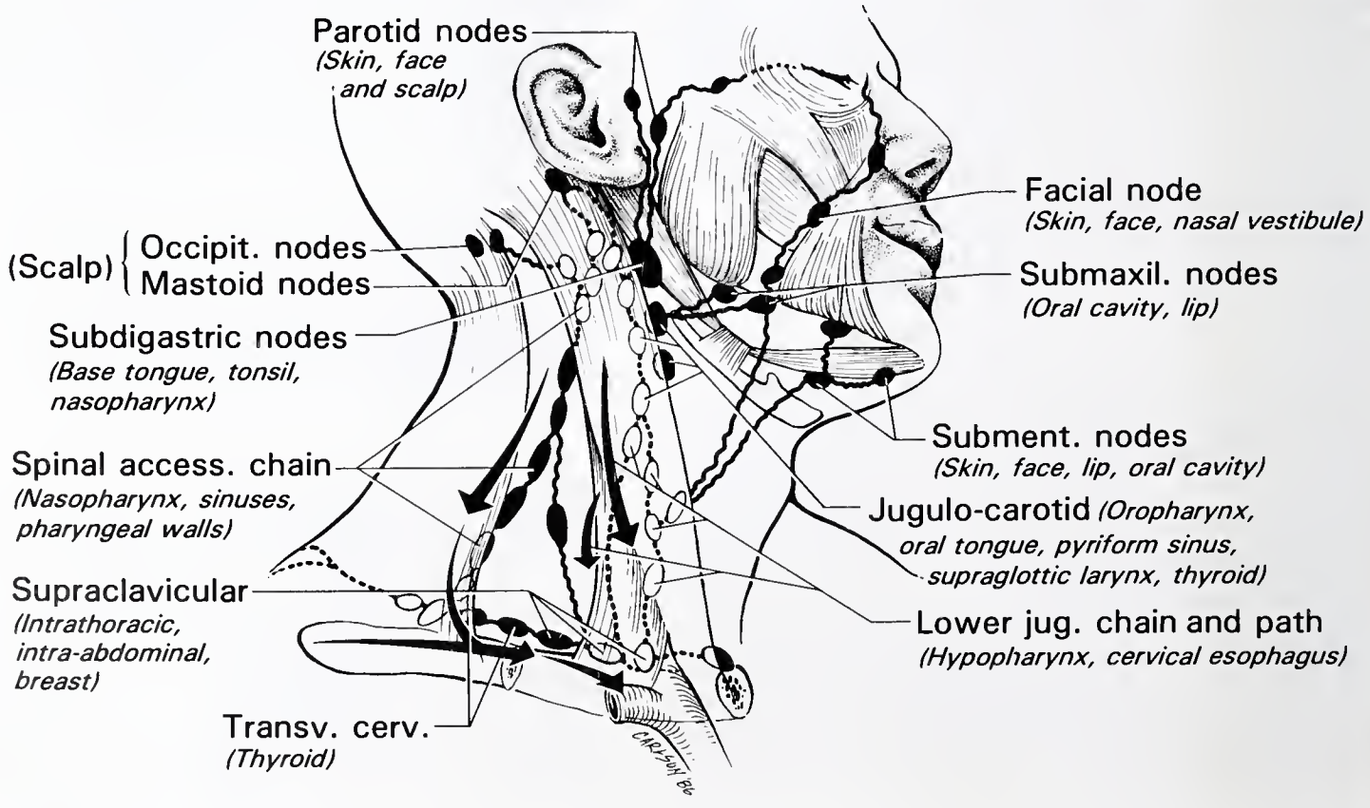
Cancerous
Primary
cervical soft tissue tumors (rare)
thyroid
salivary glands
Metastatic
from primary of the head and neck (60% to 70%)
from primary other than the head and neck (20%)
no primary found (5% to 10%)
Lymphoreticular neoplasias
Noncancerous
Benign tumors
thyroid
salivary glands
paragangliomas, carotid body tumors
Cysts and congenital lesions
thyroglossal duct anomalies
branchiogenic cysts and sinus tract
first arch
second arch
other
lymphangioma (cystic hygroma)
dermoid cyst, sebaceous cyst
cavernous hemangioma
cervical thymic rests
teratoma
laryngocele

DETECTION AND DIAGNOSIS

The first and most important diagnostic step is a careful history and physical examination, paying particular attention to the head and neck area. Special attention should be given to those areas of the upper aerodigestive tract which are beyond the reach of the simple examination using a tongue blade. In the case of a mass of the supraclavicular area, primary cancers from the chest cavity and from organs beneath the diaphragm should be suspected. Any skin lesions and tumors of the breast should be investigated.

No laboratory work-up or x-ray study can replace a careful history and diligent regional physical examination. A careful history includes the complaints related to the mass in the neck itself and also addresses symptoms that could provide clues as to the primary site of cancer. The presence of pigmented lesions and a history of skin cancers should be investigated. A recent unilateral hearing loss may indicate a serous otitis media which would guide the search towards a possible cancer in the nasopharynx. A persistent sore throat, often associated with odynophagia and referred otalgia, could be traced to primary cancer in the base of tongue, the pharyngeal walls, or the supraglottic larynx. A change in the voice and a change in eating habits with weight loss may point to a tumor in the upper alimentary tract or larynx. Particularly in patients with a history of tobacco and alcohol abuse, a diligent examination of

3. Possible sources of primary cancer () in lymph node metastasis ("The Sentinel Node").



the upper aerodigestive tract is mandatory. A consultation with a physician familiar with the regional examination of the area is recommended.

Fine needle aspiration of the neck mass is a valuable diagnostic step, provided that expert cytologic interpretation of the specimen is available. The nasopharynx, tonsillar fossa, base of tongue, and pyriform sinus are areas of the upper aerodigestive tract that can harbor cancers which remain asymptomatic for relatively prolonged periods of time. Palpation of the base of tongue, oropharynx and pharyngeal walls should be done, feeling for induration and ulceration. This step can be performed with topical anesthesia to minimize the discomfort and decrease the severity of the gagging reflex. It is important to document the size, location, consistency, tenderness, and mobility of the mass(es) of the neck in relation to constant anatomical structures (sternocleidomastoid, mandible, submandibular triangle, posterior triangle of the neck, supraclavicular fossa, anterior triangle of the neck).

Once the appropriate examination has been completed, radiographic studies guided to document the possible primary tumor site are recommended. CAT scanning, soft tissue x-rays of the neck, and other head and neck radiographs are pertinent at this stage of the investigation. If there is a palpable abnormality in the thyroid gland and a suspicion that this is the source of a primary, the appropriate diagnostic steps including fine needle aspiration of the thyroid mass, isotope scanning, and possibly ultrasound of the thyroid are indicated. The thin needle aspiration biopsy is histologically specific in the case of malignant tumors in up to 98% of cases. If the aspiration biopsy is negative, it is recommended to proceed with further work-up. If no primary tumor is found up to this point, an examination under anesthesia and endoscopic search for a primary tumor in the upper aerodigestive tract is indicated. Depending upon the location of the primary tumor and the finding at the time of examination, guided biopsies (so-called blind biopsies) should be performed. Only if the investigation for a possible primary tumor is unrewarding can the metastatic cancer be labeled as of unknown primary "origin." Anti-Epstein-Barr virus serology testing may be of value for the detection of primary cancers of the nasopharynx.

In the case of metastatic tumors of the supraclavicular area, it is wise to perform a biopsy early to guide in the search for the primary cancer at a distant site. Patients with systemic complaints, supraclavicular or generalized lymphadenopathy should have an early tissue diagnosis established. Should the initial work-up and the biopsy specimen fail to show a specific diagnosis, close follow-up for persistent or recurrent symptoms is essential. Acquired immune deficiency syndrome (AIDS) should be suspected in the case of persistent multiple lymphadenopathy in a young adult with systemic complaints.

PRINCIPLES OF TREATMENT

Benign tumors, cysts, and congenital lesions should be treated surgically with appropriate resection. For congenital malformation, it is necessary to be aware of the embryologic development of such malformations to perform adequate removal.

In the presence of an inflammatory process, the possible etiologic cause should be established, including serologic and immunofluorescent testing. Specific stains of the specimen may be indicated.

The definitive treatment of a metastatic lymph node to the neck should be referred to the appropriate treatment team. The management of metastatic cancer with a concomitant known primary tumor in the head and neck area differs from metastatic squamous carcinoma of unknown primary origin or metastatic undifferentiated carcinoma of unknown primary origin. Certainly a guided work-up is indicated if a diagnosis of lymphoproliferative disease is rendered. A multimodality treatment is indicated for most malignant metastatic neoplasms.

RESULTS AND PROGNOSIS

The results of treatment will depend upon the histologic findings, the staging of the disease process, and the appropriateness of treatment. In the event that an open biopsy of metastatic carcinoma of the upper neck area has been performed, the patient should be referred for comprehensive evaluation and treatment. Prognosis is best for metastatic squamous cell carcinoma of the upper neck of unknown primary origin, where close to a 50% three-year survival can be expected after appropriate treatment. Metastatic carcinoma in the supraclavicular area usually carries a poor prognosis. With the probable exception of supraclavicular nodes, a biopsy of a neck mass is not the first diagnostic procedure to be performed.

PART TWO: CHEMOTHERAPY OF HEAD AND NECK CANCER

Chemotherapy for patients with recurrent tumor

The accepted treatment for most head and neck cancer remains either surgery or radiation therapy or a combination of both. If a patient develops local recurrence after seemingly adequate treatment, or distant metastasis, chemotherapy should be considered. This treatment is given when an attempt is made to palliate local regional recurrences and distant metastasis. Patients who develop local recurrences after treatment have a very poor prognosis. The median survival after developing local recurrences usually ranges from six to ten months despite the ability of several drugs to produce shrinkage of these lesions. The management of patients with recurrent tumor requires attention to proper nutrition, handling of secretions, and maintenance of an adequate airway. A number of chemotherapeutic agents have been used either alone or in combination. Even though objective tumor response after single agent or multiple agent chemotherapy may be minimal, the symptomatic improvement often has a definite palliative effect. The administration of single agents has produced a wide range of response rates. The remissions vary in length, and the reported results differ due to variability in patient selections, response criteria, and methods of data collection.

SINGLE AGENT TREATMENT

Methotrexate has been the most widely used drug and produces responses greater than 50% reduction in tumor volume in 20% to 30% of patients with recurrent or metastatic lesions.

The dosage, schedule, and method of delivery of methotrexate have been extensively studied. Weekly administration of methotrexate from 40 to 60 mg/m^2 given intravenously appears to be the standard method used to treat recurrent tumors. High-dose, intravenous methotrexate with leucovorin rescue is not superior to weekly methotrexate treatment.

Cisplatin is the most recently introduced chemotherapeutic drug with significant activity against head and neck cancer. Dose-limiting renal toxicity has been minimized by vigorous hydration, with or without the administration of mannitol. Other toxicities include marked nausea and vomiting, anemia, ototoxicity, and neurotoxicity. The nature of dose response curves for cisplatin in head and neck cancer has not been well defined, but intravenous doses of 50 mg/m^2 on day 1 and day 8 every month, or 80 to 120 mg/m^2 every three to four weeks are probably the most appropriate. Overall response rate in recurrent tumor patients ranges from 25% to 30% with short durations.

Other drugs such as bleomycin, *Vinca* alkaloid, 5-fluorouracil, Adriamycin, and hydroxyurea as single agents have been tried with some anti-tumor activity, but obviously with less anti-tumor activity than methotrexate or cisplatin. Complete response is very uncommon with single drugs, and duration of response averages three to four months.

COMBINATION CHEMOTHERAPY

Although many trials have investigated the effect of combination chemotherapy in recurrent head and neck squamous cancer, very few randomized studies have compared combination chemotherapy with single agent therapy. When response rate, remission duration, and overall survival are compared in patients with recurrent or metastatic head and neck cancer, there is no evidence yet that multiple regimens are superior to standard single agents. Use of aggressive combination chemotherapy may produce serious toxicity and little therapeutic gain over the best known single agents; therefore, they are not routinely recommended unless the patient is being treated under clinical protocol investigation. The major task is to find drugs with less toxicity and more sustained remissions and evaluate these through phase I and phase II protocols.

Initial chemotherapy before surgery and/or radiation treatment

The value of chemotherapy before or after successful surgery and/or radiation therapy has not been determined. Many studies on post-surgical or post-irradiation adjuvant chemotherapy have been disappointing, and therefore the arguments for initial chemotherapy have been made. Induction chemotherapy in patients with previously untreated head and neck cancer can induce dramatic tumor regression with acceptable toxicity. Drug delivery to primary tumors with adequate blood supply is better than in tumors in previously operated or irradiated areas which are replete with scar tissue. Tumor response rates are generally higher in these patients than in previously treated patients, if one uses the same chemotherapeutic regimen. Cisplatin, methotrexate, bleomycin, and 5-fluorouracil, either alone or in combination, have been used for induction chemotherapy. Response rates of 60% to 90% have been documented with the induction regimen in previously untreated patients. Recent combinations of cisplatin and 5-fluorouracil have achieved a clinical complete response in 20% to 50% of patients after two or more cycles of treatment. Most studies have demonstrated tolerable levels of toxicity and lack of surgical complications attributable to the chemotherapeutic regimens. Several studies have demonstrated that the staging of the tumor characteristics are directly related to complete response rates from preoperative chemotherapy, with smaller tumors responding more frequently. Several pilot studies have reported significant improvements of survival in patients who obtained complete response to chemotherapy. Therefore, recent clinical trials are being directed toward improving chemotherapeutic regimens either by adding other drugs or alternating non-cross-resistant drug combinations to achieve more complete response. The therapeutic value of induction chemotherapy has not yet been established and therefore is not recommended as routine procedure unless the patient is being treated under clinical investigative protocols.

SELECTED REFERENCES

American Joint Committee on Cancer: Manual for Staging of Cancer, ed 2. Philadelphia, J B Lippincott Co, 1983.

Batsakis JG: Tumors of the Head and Neck: Clinical and Pathological Considerations, ed 2. Baltimore, The Williams & Wilkins Company, 1979.

Fletcher GH: Textbook of Radiotherapy. Philadelphia, Lea & Febiger, 1980.

Million RR, Cassisi NJ: Management of Head and Neck Cancer: A Multidisciplinary Approach. Philadelphia, J B Lippincott Co, 1984.

Suen JY, Myers EN: Cancer of the Head and Neck. New York, Churchill Livingstone Inc, 1981.

Urologic cancer

Urologic Oncology Workgroup
David A. Swanson, MD, Chairman
William A. Anthony, MD; Odis Lynn Avant, MD; Wickliffe Pickett Curtis, MD; John M. Ferrell, Jr, MD; Gerald T. Keegan, MD; Theodore R. McMillin, Jr, MD; Paul C. Peters, MD; Michael Sarosdy, MD; Michael M. Warren, MD; Gunar K. Zagars, MD

Contents

17 BLADDER CANCER
19 PROSTATE CANCER
21 GERM CELL TESTICULAR TUMORS

BLADDER CANCER

Introduction

Cancer of the bladder is the second most common genitourinary tumor. Although it is usually confined to the bladder at time of diagnosis and amenable to local therapeutic measures, up to 80% of patients develop subsequent tumors.

Epidemiology and etiology

RISK FACTORS

There is a high association with smoking, and a direct causal relationship is probable.

Aromatic amines and the naphthylamines have been demonstrated to be carcinogenic.

Although the number of cases secondary to occupational exposure is relatively small, industrial exposure may convey an increased risk, particularly in the dye, rubber, leather, paint, and organic chemical industries.

INCIDENCE

There will be an estimated 45,400 new cases in the United States in 1987.

An estimated 10,600 people will die of bladder cancer in the United States in 1987. This is almost double the number of deaths secondary to cancer of the uterine cervix.

Males outnumber females 2:1.

It is most common among people ages 50 to 70.

PATHOGENESIS

The cause of bladder cancer remains unknown.

Detection and diagnosis

CLINICAL DETECTION

Routine screening

A complete urinalysis (dipstick chemical analysis plus microscopic) is recommended at the time of any general examination by the primary care physician.

For high-risk patients, additional tests such as cystoscopy, cytology, or flow cytometry may be warranted.

History and physical examination

Hematuria of any frequency, either gross or microscopic, whether by history alone or laboratory findings, is abnormal and requires further investigation.

Irritative symptoms (eg, frequency, urgency, and dysuria) may herald the diagnosis of bladder cancer.

DIAGNOSTIC PROCEDURES

Urinalysis

Excretory urogram with retrograde pyelograms when indicated

Cystoscopy

Classification

HISTOPATHOLOGY

Histology

Epithelial tumors comprise 98% of all bladder tumors.

Transitional cell carcinoma accounts for over 90%, squamous cell carcinoma for 6%-8%, and adenocarcinoma for 1%-2% of epithelial tumors.

Grading

A standard grading system (modeled after the World Health Organization and Armed Forces Institute of Pathology) is recommended for Texas: Grade 0 cancer (papilloma), grade I (a low degree of cellular anaplasia), grade II (intermediate between grades I and III), and grade III (highly anaplastic). The pathologist should specify in his report any alternative usage.

The term papilloma should denote a very low grade papillary malignant lesion (grade 0) and does not equate with carcinoma in situ (CIS).

STAGING WORKUP

Staging begins with an adequate biopsy. This should be deep enough to determine the depth of invasion and extensive enough to determine the extent (multicentricity) of cancer, such as by selected site biopsies of apparently normal mucosa.

Bimanual examination under anesthesia

Adequate evaluation of the upper tracts (eg, excretory urogram, retrograde pyelogram, computed tomographic scans, or ureteropyeloscopy)

Chest x-ray

CBC and serum chemistry multiple analysis (SMA-12) to include renal and liver function tests

Evaluation of the pelvic lymph nodes

Lymphangiogram or CT scan ± needle aspiration biopsy

Pelvic lymphadenectomy (when necessary)

Magnetic resonance imaging (investigational)

Bone scan (optional; low yield in the absence of symptoms)

Transurethral ultrasound and CT scans to define local extent of tumor (investigational)

STAGING CLASSIFICATION

Both the American Urologic (Jewett-Marshall) and the TNM Systems (the American Joint Committee and the UICC are in accordance) are used.

American Urologic System

Stage 0—Tumor confined to the mucosa; includes CIS

Stage A—Tumor confined to the submucosa (lamina propria)
Stage B—Muscle invasion
B1—Superficial
B2—Deep
Stage C—Invasion through full thickness bladder wall into perivesical fat
Stage D—Metastatic tumors
D1—Involvement of lymph nodes below the bifurcation of the common iliac artery; or direct invasion of contiguous organs, fixation to the pelvic wall or involvement of rectus muscles below the umbilicus
D2—Involvement of lymph nodes outside the pelvis or metastases to distant organs

TNM system
T0 —No histologic evidence of primary cancer
TIS —Flat carcinoma in situ (confined to mucosa)
Ta —Papillary noninvasive (mucosal) carcinoma
T1 —Invasion of the lamina propria
T2 —Invasion into the superficial half of the bladder wall muscle
T3a—Invasion of deep muscle
T3b—Full thickness penetration into perivesical fat
T4a—Direct invasion of contiguous organs
T4b—Tumor fixed to pelvic wall or infiltrating the abdominal wall

N0 —No involvement of regional lymph nodes
N1 —Involvement of a single homolateral regional node
N2 —Involvement of contralateral, bilateral, or multiple nodes
N3 —A fixed (nodal) mass on the pelvic wall with a space between this and the tumor
N4 —Involvement of juxtaregional nodes

M0 —No known distant metastases
M1 —Distant metastases present (specify site)

Principles of treatment

OVERVIEW
It is important to consider the location, morphology, grade, stage, prior tumors and their treatment history, and the patient's general medical condition when planning treatment. For management, bladder cancer can be divided into superficial (CIS, 0, A, B1), deep (B2, C), and disseminated (D).

Surgery
Superficial (CIS, 0, A, B1)
Endoscopic resection/fulguration when complete control is possible (including laser where appropriate)
Segmental (partial) cystectomy in highly selected cases: no antecedent history of bladder tumors, a well-defined solitary tumor, and a location that permits at least a 2 cm surgical margin without ureteral reimplantation
Radical (total) cystectomy when tumors are not able to be controlled transurethrally, for refractory symptomatic CIS and for most B1 tumors if poorly differentiated (grade III)
Urethrectomy for tumors at or distal to the bladder neck
For high grade cancer, see the preceding two paragraphs
Deep (B2, C)
Segmental cystectomy for same indications as above
Radical cystectomy
Urethrectomy (as above)
Disseminated
Endoscopic management for local control
Urinary diversion ± cystectomy, rarely for palliation

Radiation therapy
Superficial
For superficial disease, interstitial radiation therapy has proved more successful than external beam therapy.
As a poor alternative if the patient is not a medical candidate or refuses radical cystectomy
Deep—as an alternative to radical cystectomy if surgery is contraindicated (or refused)
Disseminated—for palliation of pain, obstruction, and hematuria

Chemotherapy
Superficial
Intravesical instillation of chemotherapeutic agents may help control selected superficial cancers.
For high grade superficial tumors, intravesical chemotherapy (or immunotherapy, see next section) is a highly recommended adjunct to transurethral management.
Deep—Systemic (or intra-arterial) chemotherapy preoperatively or in the nonsurgical patient is investigational.
Disseminated—Systemic chemotherapy may be effective for the treatment of locally recurrent, advanced pelvic, or disseminated disease.

Immunotherapy
Superficial
BCG intravesical instillations (± intracutaneous scarification) are an alternative to intravesical chemotherapy.
BCG is currently the agent of choice for diffuse and symptomatic carcinoma in situ.
Deep—BCG therapy is investigational and not currently recommended for muscle-infiltrating tumors.

SPECIAL CONSIDERATIONS
Radical cystectomy may be recommended for selected patients with local recurrence of tumors or refractory symptoms after definitive therapy such as radiation or chemotherapy.

MANAGEMENT OF RECURRENT DISEASE
For tumor recurrence, restage and treat appropriately.
For disseminated disease, palliative care only may be the most appropriate option.
Terminal patients need optimal supportive care; hospice care is strongly recommended.

INVESTIGATIVE OPTIONS
Systemic chemotherapy
Immunotherapy
Photodynamic therapy (hematoporphyrin derivatives with

laser)
Alternatives to ileal conduit for urinary diversion

Results and prognosis

RECOMMENDATIONS FOR FOLLOW-UP
Superficial disease
- Cystoscopy at regular intervals with frequency determined by recurrence rate and assessment of risk
- Urinary cytologies (especially in patients with carcinoma in situ or high grade tumors)
- Evaluation of the upper tracts at periodic intervals may be helpful and is advised for unexplained hematuria or positive urine cytologies. Retrograde pyelography may be superior to excretory urography.

Deep
- Physical examination, serum chemical survey (SMA-12), and chest x-ray at regular intervals
- Periodic excretory urogram is recommended.
- CT scans may help assess the pelvis for recurrence.

Disseminated—patients require close monitoring for morbidity of treatment or palliation of symptoms secondary to the disease.

SURVIVAL
Survival rates vary inversely with increasing stage.
Within each stage many variables influence the survival time.
- Newer treatment modalities and earlier application of adjuvant therapy may influence prognosis.
- Currently this is a very rough estimate of survival at five years:
  - Superficial, low grade—65%-75% (high grade is poorer)
  - Deep—40%-55%
  - Disseminated—10%-20%

PATTERNS OF FAILURE
Superficial disease tends to recur in the bladder although disseminated disease is possible.
Deep
- May recur in pelvis (residual disease postcystectomy or nodal metastases)
- May become disseminated in lymph nodes or visceral organs

PROSTATE CANCER

Introduction

Cancer of the prostate is a disease more commonly seen in older men. There are more clinically unrecognized cancers than those clinically apparent. Because of this, there seems to be a spectrum of biologic activity and aggressiveness.

Epidemiology and etiology

RISK FACTORS
Increasing age
Black men are at higher risk and generally present with more advanced disease.
The etiology is not known, but are there are several influences identified:
- Genetic
- Hormonal
- Diet
- Chemical carcinogens

INCIDENCE
It is the second most common male cancer (the most common among nonsmokers).
It is the third most common cause of cancer deaths among men.
There will be an estimated 96,000 new cases in the United States in 1987.
There will be an estimated 27,000 deaths in the United States in 1987.

PATHOGENESIS
There is malignant transformation of the stem cells of the acinar prostatic epithelium peripherally.

Detection and diagnosis

CLINICAL DETECTION
Routine screening
- A rectal examination should be done at every general examination for all males over 40 and at least once per year.

History and physical examination
- Onset of obstructive symptoms (particularly if recent/rapid) or unexplained irritative symptoms can be early warnings of cancer.
- Bone pain, anemia, or azotemia are associated with advanced or metastatic disease.
- A family history of cancer of the prostate may contribute.
- On physical examination, any induration or change in contour of the prostate requires explanation.

DIAGNOSTIC PROCEDURES
Serum prostatic acid phosphastase
Plain x-ray of the abdomen (kidneys, ureters, and bladder, with or without excretory urogram)
Ultrasound may indicate a suspicious area requiring biopsy.
Biopsy
- Aspiration cytology (requires pathologist experienced in this technique)
- Needle core biopsy, transrectal or transperineal
- Transurethral resection of the prostate (not likely to be positive in patients with smaller/localized lesions)

Classification

HISTOPATHOLOGY
Histology
- Over 95% are tubuloalveolar or acinar adenocarcinomas
- Transitional cell carcinoma of the prostatic ducts has a different natural history and requires different treatment than adenocarcinoma.

Grading
- Prostate cancers are divided into grades based upon differentiation.
- We recommend that the Gleason classification of grading be used; other systems may be used to complement it.

STAGING WORKUP

Careful digital rectal examination

CBC and multiple serum chemical analysis (SMA-12) to include alkaline phosphatase

Serum prostatic acid phosphatase

Bone scan (can also evaluate renal function)

Ultrasound or CT scan to assess local lesion (optional)

Non-invasive tests are generally performed first; if no evidence of metastatic disease is present, adequate evaluation of the lymph nodes is required.
- Lymphangiogram or CT scan with or without needle aspiration biopsy
- Pelvic lymphadenectomy is most sensitive and may be appropriate when radiographic tests fail to demonstrate metastases.

STAGING CLASSIFICATION

The American Urologic System is used far more commonly than the TNM System of the American Joint Committee or UICC.

Stage A —Clinically unsuspected cancer
- A1—Well-differentiated tumor only; three or fewer microscopic foci of tumor
- A2—Not well-differentiated, or more than three foci

Stage B —Tumor confined by the prostatic capsule
- B1—Tumor no larger than 1.5 cm in diameter and confined to one lobe
- B2—Tumor larger than 1.5 cm or in both lobes

Stage C —Tumor beyond the capsule

Stage D —Metastatic tumor
- D0—Persistent unexplained elevated serum prostatic acid phosphatase
- D1—Tumor in pelvic lymph nodes
- D2—Tumor in lymph nodes outside the pelvis or nonlymphatic metastases

Principles of treatment

OVERVIEW

Treatment is divided into that for localized disease and that for disseminated disease. Treatment is potentially curable only when the disease is localized (and usually low grade). For other stages, our goal is long term palliation.

TREATMENT PLANS

No treatment
- Recommended for stage A1 disease.
- Patients require continued follow-up and possible repeat biopsy.

Definitive treatment
- Appropriate for stages A2 through C2 (and sometimes stage D1) disease.
- Radical prostatectomy
  - Optimal for stage B1 disease.
  - May also be considered for stages A2 through D1 in selected patients, although it is probably only palliative for high grade/high stage tumors.
- Radiation therapy—may be helpful for stages A2 through D1
  - External beam therapy is highly likely to provide local control.
  - A linear accelerator is optimal (at least 10 million electron volts (MEV) minimum; 18 MEV or greater is preferable).
  - Extended fields for positive lymph nodes has not been shown to improve results.
  - Neutron beam therapy is experimental.
  - Interstitial radiation
    - ^{125}I and ^{198}Au have been used by some centers to treat localized disease in selected patients.
    - Other isotopes (eg, ^{192}Ir) are being investigated.
    - The committee does not recommend routine use of interstitial radiation for advanced local disease regardless of isotope selected.

Palliative treatment
- Appropriate for symptomatic patients.
- Surgery
  - Transurethral resection of prostate
    - To relieve outlet obstruction
    - To control hematuria (occasionally)
    - To relieve ureteral obstruction (rarely)
  - Temporary urinary diversion (including endourologic) for ureteral obstruction
  - Bilateral scrotal orchiectomy—as hormonal therapy
- Hormones
  - Oral conjugated estrogens
  - Luteinizing hormone-releasing hormone (LH-RH) agonists
  - Progestins
  - Ketoconazole (investigational)
- Chemotherapy—for hormone refractory patients (investigational)
- Radiation therapy
  - Relieve pain secondary to bony metastases
  - For local control in patients with refractory outlet obstruction, hematuria, or ureteral obstruction (occasionally)
  - To breasts before hormone therapy to prevent gynecomastia

SPECIAL CONSIDERATIONS

Biopsy post definitive radiation therapy
- Recommended only for palpable change, not routinely (except investigational)
- If biopsy is positive:
  - Palliative therapy with hormones
  - Salvage radical prostatectomy may be appropriate for highly selected patients.

Positive margins in prostatectomy specimen—consider radiation therapy

MANAGEMENT OF RECURRENT DISEASE
Only rare patients are candidates for definitive treatment.
Most patients are best given palliative treatment.
Terminal patients need optimal supportive care; hospice care is strongly recommended.

INVESTIGATIVE OPTIONS
Ketoconazole as hormone therapy
Long term follow-up of patients on LH-RH agonists
Cytotoxic chemotherapy
  Initially for high-risk patients
  For hormone refractory patients

Results and prognosis

RECOMMENDATION FOR FOLLOW-UP
Routine follow-up should include periodic:
  Physical examination with digital evaluation of the prostate
  Serum prostatic acid phosphatase
  CBC and serum chemical analysis (SMA-12)
  Plain x-ray of the abdomen (KUB)—optional
  Serum prostate specific antigen (investigational)
Specific complaints should be evaluated with appropriate diagnostic studies (eg, bone scan).

SURVIVAL
Survival rates vary inversely with increasing grade and stage.
Survival rates for stage A1 are virtually the same as those for age matched controls without cancer.
Survival rates at five years do not truly reflect the impact of the disease and treatment, particularly for low grade/low stage tumors. Ten- and even 15-year rates are better yardsticks.
Since disseminated disease responds to hormone manipulation in approximately 80% of patients, survival time may be much better than disease-free interval in patients treated for localized disease.
Once metastases are present, duration of response to hormones is generally 24 to 30 months; median survival after progression despite optimal hormone therapy is 6 to 12 months.

PATTERNS OF FAILURE
Local
  Recurrence after prostatectomy
  Palpable induration or increased size after radiation therapy
  Symptoms of obstruction or hematuria
  Positive biopsy (investigational)
Distant
  Lymph nodes
  Bone
  Other nonlymphatic organs

GERM CELL TESTICULAR TUMORS

Introduction

Testicular cancer is a highly treatable, usually curable cancer which develops predominantly in young and middle-aged men.

Epidemiology and etiology

RISK FACTORS
Cryptorchidism (including an increased risk of tumors in the normally descended side) is the best-documented risk. The less descended the testis, the greater is the risk. Orchidopexy does not prevent malignant tumor formation nor eliminate the risk.
There may be a genetic predisposition; it can be associated with intersex conditions.
There is a predisposition to bilaterality.

INCIDENCE
There are two to three new cases per 100,000 men in the US each year.
There will be an estimated 5,500 new cases in the US in 1987, including 400 deaths.
There are three age peaks—infancy, young adults, and older men.
It is infrequent in blacks.

PATHOGENESIS
At least 95% are germ cell tumors.
They originate from primordial germ cells.
Different histologic types probably represent different degrees of differentiation along somatic or trophoblastic lines.

Detection and diagnosis

CLINICAL DETECTION
Screening
  It is strongly recommended that testicular self-examination (TSE) be taught to all young men.
  TSE can be taught by the primary care physician, in a school or public teaching program, or by another designated health professional.
  All available educational modalities should be recruited to this important task.
History and physical examination
  The most common finding is an intrascrotal mass that is usually painless.
  Change in the size, weight, shape, or consistency reported by the patient or found by the physician should be evaluated.
  Symptoms secondary to systemic disease may occur (sore or enlarged breasts, back pain, hemoptysis, nausea or vomiting, or an abdominal mass) and must be investigated.
  On physical examination a solid mass within the tunica albuginea is the cardinal finding.
  Gynecomastia, abdominal mass, or supraclavicular lymph nodes may be present.

DIAGNOSTIC PROCEDURES
Laboratory—alpha-fetoprotein (AFP) and beta-chain human chorionic gonadotropin (β-HCG)
Radiographic—transscrotal ultrasonography may help differentiate a testicular mass from an extratesticular one, or a

fluid-filled scrotal mass from a solid one.

Other

An intratesticular mass is cancer until proven otherwise.

If the diagnosis cannot be established properly, inguinal surgical exploration is the most *conservative* approach.

Transscrotal exploration and needle biopsy of the testis are not recommended.

Classification

HISTOPATHOLOGY

The World Health Organization's histologic classification, with approximate distribution in parentheses:

Tumor showing single cell type (60%)

Seminoma (35%)

Embryonal carcinoma (20%)

Teratoma (5%)

Choriocarcinoma

Yolk sac tumor

Tumor showing more than one histologic pattern (40%)

Embryonal carcinoma and teratoma with or without seminoma (30%)

Embryonal carcinoma and yolk sac tumors with or without seminoma

Embryonal carcinoma and seminoma

Yolk sac tumor and teratoma with or without seminoma

Choriocarcinoma and any other element

STAGING

Workup

Physical examination

CBC, serum chemical analysis (SMA-12)

AFP, β-HCG, LDH (isoenzymes preferable)

Chest x-ray

CT scan of the chest (the most sensitive test to evaluate for lung metastases, but its cost effectiveness has not been documented)

CT scan of the abdomen and pelvis

Lymphangiogram (nonseminomas only): optimal evaluation for intranodal disease—may have its greatest value in orchiectomy alone (surveillance) protocols because of duration of retained contrast

Retroperitoneal lymphadenectomy is the most sensitive way to evaluate for microscopic nodal disease, but it is negative in 80%-85% of adequately staged patients without clinical evidence of metastases.

Classification

Seminoma

I—Tumor confined to testis

II—Tumor in the regional lymph nodes

A—No retroperitoneal mass as large as 10 cm in diameter

B—Retroperitoneal nodal masses 10 cm or greater in diameter

III—A—Nodal disease above the diaphragm

B—Extranodal (nonlymphatic) disease

Nonseminoma

Staging systems are diverse, but most agree that stage I (or A) is confined to the testis, stage II (or B) shows spread to regional lymph nodes (and may be broken down into B1, B2, B3 for volume of disease), and stage III (or C) is advanced abdominal disease, nodal disease above the diaphragm, or extralymphatic disease. For prognosis and comparison of results, it is helpful to break down stage III such as:

III A —Disease in supraclavicular lymph nodes

III B1—Marker elevation only (post retroperitoneal lymphadenectomy)

B2—Minimal pulmonary disease

B3—Advanced pulmonary disease

B4—Advanced abdominal disease

B5—Visceral disease (other than lung)

Principles of Treatment

OVERVIEW

Although multimodal management has yielded excellent survival results, inguinal orchiectomy remains the cornerstone of management. Before entering any of the following treatment plans, all patients have had a radical (inguinal) orchiectomy as initial management.

TREATMENT PLANS

Seminoma

Stage I—Subdiaphragmatic radiation therapy is given to para-aortic and ipsilateral ilioinguinal lymph nodes (generally 2,500 rads in three weeks).

Stage II A—Dose is the same as for stage I, but usually gets boost of 500–1,000 rads to nodal masses. Supradiaphragmatic radiation is probably no longer indicated.

Stage II B—Treatment is in a state of flux. If radiation therapy is given (same dose as for stage II A), the patient may benefit from prophylactic radiation to the mediastinum and supraclavicular lymph nodes. However, primary chemotherapy (cisplatin or cisplatin-based program) seems to be replacing radiation therapy for this stage.

Stage III—Primary chemotherapy with cisplatin or cisplatin-based program

Nonseminomas

Stage I—Staging retroperitoneal lymphadenectomy is currently still widely performed, although orchiectomy alone with close observation for clinical stage I disease is rational and being actively investigated.

Stage II—Retroperitoneal lymphadenectomy for low volume disease is diagnostic and may be therapeutic. The use of adjuvant chemotherapy post node dissection is controversial and should probably be given only to patients at high risk for relapse. Primary chemotherapy followed by retroperitoneal lymphadenectomy for residual radiographically diagnosed masses should be employed for advanced abdominal disease.

Stage III—Primary combination cytotoxic chemotherapy is recommended followed by surgery to remove residual

masses only after biomarkers have fallen to normal. Currently, cisplatin-based programs of chemotherapy are recommended.

SPECIAL CONSIDERATIONS
The patient with a contaminated scrotum (transscrotal incision) may require inguinal exploration to remove the distal spermatic cord, and possibly a partial scrotectomy.

MANAGEMENT OF RECURRENT DISEASE
For tumor recurrence, restage and treat appropriately.
Growing masses in the face of normal tumor markers should be surgically removed as suspected mature teratomas.
If disease recurs despite prior chemotherapy, salvage chemotherapy programs may be appropriate.

INVESTIGATIONAL OPTIONS
Orchiectomy alone (surveillance) for clinical stage I nonseminomatous germ cell tumors
Bone marrow banking before aggressive chemotherapy
Fertility-sparing retroperitoneal lymphadenectomy (limited staging procedure)
Primary combination chemotherapy for clinical stage II disease

Results and prognosis

RECOMMENDATIONS FOR FOLLOW-UP
Seminomas—physical examination and chest x-ray (and repeat of any markers known to be elevated) at regular intervals, starting at every three months for stage II and higher, every six months for stage I disease, and progressing to annual visits at five years
Nonseminomas
Post retroperitoneal lymphadenectomy—physical examination, chest x-ray, tumor markers (AFP and β-HCG) every three months for two years, every four months for one year, every six months for two years, then yearly
Orchiectomy alone—physical examination, chest x-ray, KUB (until contrast is resorbed), tumor markers (AFP and β-HCG) at two-month intervals for one year, three-month intervals for two years, six-month intervals for two years, then yearly, with CT scan of the abdomen repeated at six, 12, and 18 months
Postchemotherapy—as needed to monitor morbidity of chemotherapy, then as in "post retroperitoneal lymphadenopathy" above if there has been a complete response, with CT scans at periodic intervals to assess the retroperitoneum

SURVIVAL
Seminomas
Stage I and II A should have > 95% five-year survival rates.
Stage II B and III should have at least 85% five-year survival rates, and > 90% now seems to be a reasonable goal.
Nonseminomas
Stage I and low volume stage II should have > 95% five-year survival rates.
High volume stage II and favorable stage III presentation should have five-year survival rates around 80%-85% or higher.
High volume stage III (eg, advanced abdominal disease) has produced five-year survival rates of 60%-70%, but it is hoped that more aggressive current management programs might push this category to rates comparable to those for stage II and favorable stage III disease.

PATTERNS OF FAILURE
Elevation of biomarkers without measurable disease
Retroperitoneal mass (lymph node metastases)
Non-lymphatic metastases above or below the diaphragm

Pediatric cancers

Pediatric Oncology Workgroup
Jan van Eys, PhD, MD, Chairman
William Paul Bowman, MD; Howard A. Britton, MD; George R. Buchanan, MD; Donald Joseph Fernbach, MD; Mary Ellen Haggard, MD; Judy K. Mullins, MD; Robert E. Myers, MD; Jerry James Swaney, MD

Contents

24 INTRODUCTION

24 THE ROLE OF THE FAMILY PHYSICIAN IN THE CARE OF THE CHILD WITH CANCER

26 PART ONE: THE MEDICAL AND ONCOLOGICAL MANAGEMENT OF PEDIATRIC CANCERS
26 Pediatric Brain Tumors
28 Neuroblastoma
29 Wilms' Tumor (Nephroblastoma)
30 Childhood Leukemia
36 Childhood Osteosarcoma
36 Rhabdomyosarcoma and Soft Tissue Sarcoma
37 Ewing's Sarcoma
38 Retinoblastoma
40 Childhood Non-Hodgkin's Lymphoma (NHL)

41 PART TWO: ISSUES IN PEDIATRIC CANCER CARE
41 An Optimal Care Facility for Childhood Cancer
42 Cost as an Issue in Accessibility
42 Psychosocial Issues

44 REFERENCES
45 ADDITIONAL SUGGESTED READING

INTRODUCTION

Cancer in children is quantitatively and qualitatively different from cancer in adults. It is quantitatively different because the overall incidence is lower, and because the relative incidence of various cancers is unique among children. Leukemia ranks first in incidence, with central nervous system malignancies second. Among solid tumors, sarcomas predominate, whereas carcinomas are rare. The diseases are qualitatively different because many are peculiarly pediatric. Wilms' tumor, neuroblastoma, and childhood early pre-B-cell acute lymphocytic leukemia are almost exclusively limited to the pediatric age range.

Childhood cancer is, however, not as rare as frequently believed: one in 600 children will be affected. Since our current survival rate approximates 60%, in a few years, one in 1,000 young adults will have had cancer as a child. The course of cancer, its treatment, and the side effects of such treatment are enormous public health concerns. Much of the success of pediatric cancer care is the result of chemotherapy. Children have tumors that are chemotherapy-sensitive, and they tolerate chemotherapy better than do adults. Cancer cure in children can be achieved by chemotherapy only, as demonstrated for acute lymphocytic leukemia.

However, precisely because of the length of chemotherapy and the high response rate, the treatment is always prolonged and the cancer in children is always a chronic disease.

For this reason we must keep in mind that children are different. They develop so rapidly that growth and development must proceed during the period that cancer therapy is ongoing. The quality and appropriateness of that growth and development determine the ultimate outcome of the mature cured adult that the child ought to become. One simply cannot wait until the cancer is biologically cured before one addresses the child's mental development. Delayed development cannot be overcome—one cannot rehabilitate a developmentally delayed child. Developmental milestones must be acquired in a timely, stepwise, sequential, and orderly manner.

Therefore, rehabilitation in children must be primarily preventive rather than restorative. For children with cancer, cure is the norm. Because no childhood cancer is *a priori* incurable anymore, the corollary of the proposition that rehabilitation in children ought to be preventive is that all children should be considered curable. The goal of our care should be "the truly cured child": a child who is mentally healthy, on par with peers in developmental aspiration, and who can function at an age-appropriate level in society.

Expertise in pediatric oncology is not just the way in which the disease is healed, but also the way the child is managed as a person.

This report addresses the medical and oncological management of the most common and treatable malignancies in childhood for the practicing primary physician. Some of these summaries are given in more narrative form and others in more outline form, depending upon the complexity behind the diagnosis. In addition, summaries of issues in total care and follow-up are provided.

THE ROLE OF THE FAMILY PHYSICIAN IN THE CARE OF THE CHILD WITH CANCER

Introduction

Cancer in children is a relatively rare entity accounting for slightly less than 1% of the more than 900,000 cases of cancer diagnosed annually in the United States (1). The vast majority of these children enter the health care system through a family physician or pediatrician. A smaller number are seen by surgeons or other specialists, in many instances as incidental diagnoses. Although most of the common childhood tumors will have metastasized before the diagnosis is made, there are always cases where an early diagnosis is possible and where early intervention may be life-saving. Obviously, the price for the early detection is eternal vigilance coupled with a reasonably high index of suspicion. The primary care physician who performs a thorough physical examination each time a child is seen, sooner or later will be rewarded by the early detection of an asymptomatic tumor.

The cardinal signs of cancer in children are quite distinct from the widely publicized seven warning signs for adults. Cancer belongs low down on the list of differential diagnoses,

but it cannot be ignored as long as it is the most common cause of death from disease in children after the newborn period. For the majority of children it is a treatable and curable disease.

Cardinal symptoms of cancer in children

FEVER

The diagnosis of fever is an everyday common problem for the pediatric practitioner. Most fever is caused by infection even in the child with cancer. In the typical bacterial infection, fever remits promptly after antimicrobial therapy is begun; and, in most viral infections, fever is of relatively short duration. Not a few children are eventually seen by oncologists after an infectious disease evaluation fails to identify a cause for persistent fever. High fever is a common complication of leukemia. Unrelenting fever may also reflect necrosis in an occult tumor and may be seen in a lymphoma or histiocytosis. A white blood cell differential can quickly document neutropenia and, in many cases of leukemia, abnormal cells may be seen on the routine peripheral blood smears. A bone marrow examination is indicated whenever there is any doubt or to confirm a suspected diagnosis.

PAIN

Pain is a major reason for bringing the child to a doctor. Bone pain or arthralgia has been observed in 15% to 23% of children with leukemia, a fact which must be considered in the differential diagnosis of rheumatoid arthritis (2). Focal pain is common with bone tumors and is usually associated with swelling and tenderness. Not infrequently, the pain appears after trauma, which may confuse the clinician in some instances. Localized pain may occur with solid tumors, but some intra-abdominal tumors may become quite large without causing discomfort. Headaches are classic features of intracranial neoplasms; but in the young child with open cranial sutures, the natural decompression of increased intracranial pressure may mask symptoms until quite late. Typically, increased intracranial pressure causes recurrent early morning headaches often accompanied by vomiting. In time, the headache may become more consistent, constant and severe. "Irritability" may be the "headache" of the young child.

MASS

A silent abdominal mass is the common presenting complaint of many children with Wilms' tumor or neuroblastoma. It astonishes many parents (and many physicians) how large a mass can become before it is detected. Many parents feel guilty because they did not react sooner to what seems, in retrospect, so obvious. Any mass in the abdomen of a child must be considered to be malignant until proven otherwise. Of course, any mass in an unusual location deserves investigation; and any persistent or growing mass, with or without an antecedent history of trauma, deserves consideration for further diagnostic studies. Few tumors in children will remain constant in size for very long.

Persistent lymphadenopathy is another common clinical complaint in the pediatric clinic. In a study of 245 lymph node biopsies from Columbus Children's Hospital, 13% were malignant (3). The authors recommend a biopsy in an asymptomatic child if a node increases in size after 2 weeks, fails to decrease after 4–6 weeks, or fails to return to normal size after 8–12 weeks. Enlarged lymph nodes in a child with fever for more than one week, weight loss, or abnormal chest x-rays, are highly likely to be associated with serious disease. Similarly, enlarged nodes other than in the anterior cervical chain, especially supraclavicular nodes, should be viewed more suspiciously (4).

PURPURA

This complaint is usually a manifestation of thrombocytopenia caused by compromise of the bone marrow by leukemia or by metastatic tumor.

PALLOR

Anemia, similarly, represents compromise of the bone marrow. The anemia is invariably normocytic and normochromic and is associated with reticulocytopenia. Bone marrow examination can be diagnostic.

CHANGE IN BALANCE, GAIT, PERSONALITY

Brain tumors are the second most common group of cancers in children. Slightly more than half of these tumors occur in the posterior fossa and commonly cause disturbances of gait and balance. Tumors of the supratentorial area may present as seizures. Midline tumors may cause insidious personality changes. Many of these children are brought to the doctor because the mother recognizes something "different" about the child. More than a few of these parents have complained about the difficulty they had in convincing someone that something was wrong, and it is not uncommon for symptoms to have been present for quite some time before a definitive diagnosis is finally made.

SQUINT, OR CHANGE IN THE EYE

The classic sign of retinoblastoma is the so-called cat's eye reflex, a whitish reflection through the pupil when the eye is turned. This is visualization of the actual tumor through the lens. Lacking this, some children may simply squint or otherwise act as if they cannot see well. An ophthalmoscopic examination is always indicated. The index of suspicion should be particularly high if there is any family history of an eye tumor. Each of the siblings of a child with this tumor should undergo ophthalmoscopic examination.

When to refer

The repeated requests by pediatric oncologists that primary care physicians refer suspected childhood cancer cases to the centers* before definitive evaluation are easily defended, and compliance has been quite high. The child who reaches the center still has a better chance of survival than the patients who are treated elsewhere. In one review, the disease-free survival (four years) for patients treated on a protocol in a pedi-

*Centers—members of, or associated with a member of, a cooperative cancer study group.

atric cancer center was 58%, vs 40% for those treated on protocol outside the center (5). Patients treated on organized protocols had a four-year survival of 60% vs 19% for those not treated on a protocol (5). Other studies have confirmed these concepts (6).

Unfortunately, delays or problems with the transmission from the referring institution to the pediatric center of pertinent data, such as laboratory results, radiographs, CT scans, and particularly the pathologic slides or blocks, often result in unnecessary duplication of studies, at great cost to the family and often with much unhappiness on the part of all concerned. It is understandably difficult for parents to understand why a repeat biopsy may be necessary or why repeat surgery may be indicated in order to properly stage a new patient and in order to obtain proper fresh diagnostic material for electron microscope studies, tissue culture, biochemical analysis, surface marker studies, cytogenetics, or other types of clinical laboratory analysis.

A good solution to this is to send everything to the center *with the family*, but nothing is better than sending the patient early. Physicians who rarely see pediatric patients or specimens simply cannot be expected to be as familiar with the literature involving these problems as can specialists. The diagnostic dilemma of the pathologists confronted with a small "round" cell or "blue" cell tumor illustrates the problem. Even when specimens are properly prepared for electron microscopy, the identification of the ultrastructure requires skill and careful attention to strict criteria. In addition, specific chromosomal abnormalities have been identified in a number of pediatric tumors, but such studies cannot be done after the specimen is contaminated or immersed in fixative.

Precise anatomical or clinical staging or subgroup classification is an essential foundation for planning treatment and is best accomplished at the time of primary surgery. For most childhood cancers, the primary therapy may determine whether or not the child will live or die. With a few exceptions, once the disease relapses or recurs, the survival rate is markedly reduced.

Any physician involved in the care of these patients has an obligation to pass all information back to the primary physician promptly and to maintain constant communication thereafter. This is not just a matter of common courtesy but a basic matter of fundamental good medical practice. The involvement of the primary care physician can result in tremendous benefit to the child and to the family, especially when much of the current treatment can be done outside of the hospital, at home, and often at tremendous financial savings. Pediatric oncologists at the University of Iowa have calculated that a reduction in costs of up to 40% can be achieved by involving primary physicians in the management of their patients. Out-of-pocket costs for travel and stay at any medical center can be significant (7).

PART ONE: THE MEDICAL AND ONCOLOGICAL MANAGEMENT OF PEDIATRIC CANCERS

Pediatric brain tumors

INTRODUCTION

Pediatric brain tumors comprise about one third of all tumors in childhood. Yet the development of effective therapy has lagged behind that for other childhood malignancies, even though as a group these patients have a far better outcome than their adult counterparts. In part, this is due to the unique perceptions that physicians have about brain tumors and the achievable quality of life. However, there has also been a self-defeating preconception: the blood-brain barrier is considered to preclude the use of standard chemotherapeutic agents.

INCIDENCE AND CLASSIFICATION

The incidence and classification of brain tumors in children are well known, but some comments need to be made about nosology. The terminology of this group of brain tumors is in flux. Many of the tumors in childhood are neuroepithelial round cell tumors; but the term now coming into vogue is "primitive neuroectodermal tumor," which designates a group of morphologically similar tumors that arise in intracranial and peripheral sites of the nervous system and show various degrees of cellular differentiation. It is currently still the standard practice to talk of medulloblastomas, ependymoblastomas, and intracerebral neuroblastomas; but some pathologists propose a classification where all such tumors are primitive neuroectodermal tumors, specifying the degree of differentiation. These tumors do have similar biological behavior and there is, therefore, a rationale for this lumping; but this generates further confusion when comparing the outcome of intervention between various institutions.

GENERALIZATIONS

A number of generalizations about childhood brain tumors can and should be emphasized:

The distribution of the tumors between infratentorial and supratentorial sites is about equal but, in the very young child, supratentorial sites are found more frequently.

Tumors in children are, in general, of lower grade than the same class of tumors in adults.

Tumors other than primitive neuroectodermal tumors have a more indolent course than their adult counterparts.

Younger prepubertal children are more likely to have tumors in midline than older children, which is not unique to the central nervous system but is a generalization for all pediatric tumors.

There are brain tumors that are clearly associated with specific genetic syndromes and therefore have unique biological behavior, the most striking example being the nevoid basal cell carcinoma syndrome which has a significant incidence of medulloblastoma. In addition, many of the intracranial manifestations of von Recklinghausen's disease occur in childhood.

CANCER IN THE VERY YOUNG

In addition to the general differences between pediatric and adult onset malignancies, there is a unique subset of patients who are younger than 2 years of age. Cancers in that age group are often pathologically indistinguishable from those in older age children, but may behave biologically very differently. In addition, overtly mixed tumors are not infrequent, especially in that age group. In this young age group, supratentorial tumors begin to dominate again, comprising about 11% of all infants with central nervous system malignancies. The outcome for this group of children is extremely poor: less than 50% are alive at one year, and the overall outcome is 20% survival at five years.

SYMPTOMATOLOGY

The symptoms result from both general and focal effects. These effects may be secondary or primary, depending on whether the cause is increased intracranial pressure with displacement of normal structures or actual invasion of the surrounding tissues.

General effects

Most manifestations of brain tumors are the result of increased intracranial pressure:

- Headache
- Impaired vision
- Cranial enlargement
- Convulsions
- Mental disturbances: somnolence, irritability, and changes in personality

Focal effects

In addition to the generalized effects of tumors in the confined area of the skull or vertebral column, there are primary and secondary focal neurologic effects because of the exact location in the central nervous system. These localizing symptoms are often the initial diagnostic clues to a specific tumor. These are conveniently subdivided:

- Supratentorial tumors, hemisphere location
- Midline tumors
- Infratentorial tumors
- Pontine tumors
- Spinal cord tumors

RADIOLOGIC DIAGNOSIS

Brain tumors are the only tumors that may be treated on occasion without a tissue diagnosis, providing there is adequate radiographic demonstration of the tumor. However, tissue diagnosis ought to be pursued aggressively whenever possible.

Standard diagnostic skull films

Cranial computed tomography

Magnetic resonance imaging. This still requires cautious interpretation without concomitant CT scan.

Angiography

Myelography

ALTERNATIVE DIAGNOSTIC MODALITIES

Radionuclide scanning

Electroencephalography

Specific electroencephalographic techniques, such as brainstem-evoked potentials, are of use in evaluating lesions, especially in serial evaluations.

CLINICAL LABORATORY EVALUATION

Cerebrospinal fluid examination

Examination of the cerebrospinal fluid can be of great importance but must be performed with caution even when there is no evidence of increased intracranial pressure. The lumbar puncture should be done only as part of other studies, and the minimally required amount of fluid should be removed. The evaluation of the fluid must include a culture as well as a search for malignant cells by Millipore filter or by cytocentrifuge concentration of cellular elements. Chemical evaluation of the spinal fluid is also important, but the source of the fluid must be kept in mind, since ventricular fluid normally has a lower protein and sugar content than the fluid from the lumbar sac.

Markers of malignancy

Polyamine levels in the spinal fluid represent one marker of malignancy that is of value for those tumors that are in proximity to the circulating cerebrospinal fluid.

THERAPY OF PEDIATRIC BRAIN TUMORS

General principles

In pediatrics, the primary approach to the management of children with brain tumors is surgical. In view of the wide range of tumors and their very different biological behaviors, even a biopsy is preferable over a diagnosis by radiological means only. Over a certain age, appropriate radiotherapy is the next line of defense. Chemotherapy is viewed with some pessimism; but the same lesson, learned in all malignancies, applies to brain tumors as well: Children respond far better and tolerate chemotherapy far better than adults do. In general, chemotherapy can be divided into three types: (1) salvage chemotherapy, (2) adjuvant chemotherapy, and (3) primary chemotherapy.

Salvage chemotherapy is used for patients in whom primary curative therapy has failed.

Adjuvant chemotherapy is given in the hope that such treatment will kill remaining microscopic residual tumor and micrometastases which were not apparent at the time of primary therapy. Such patients are in remission from the primary therapy.

Primary chemotherapy would be the utilization of chemotherapy as a primary mode of approach, in the same sense that preoperative chemotherapy is given to a variety of other pediatric tumors in order to make them more resectable, or postoperative chemotherapy is given in order to avoid radiotherapy.

Definition of response

An unequivocal response is defined by: (1) anatomical evidence of tumor regression; (2) absence of dependence on dexamethasone; (3) neurological improvement. Such re-

sponses should be sustained for at least three months.

Supportive care
There are no unique features to the supportive care of children with brain tumors, although nausea and vomiting of chemotherapy is far less serious in the young child than in the adolescent and older person.

Ancillary therapy
The frequent secondary effects of the tumor make certain palliative measures quite useful. First, cerebral edema can be treated with the use of glucocorticoids.

For acute relief of symptoms, decompression can be obtained by rapid osmotic diuresis using mannitol. For long-term maintenance therapy, oral glycerol is being used. Acetazolamide inhibits cerebrospinal fluid production temporarily and may be useful. If excess fluid formation persists, bypass devices can be used for more prolonged management of hydrocephalus. At all times the need for hormonal replacement therapy should be assessed.

Vigorous rehabilitation efforts should be included in all brain tumor treatment programs. Survival can be very prolonged and cures are not infrequent. But even for those patients with very limited life expectancy, careful attention to rehabilitation will give an immensely better quality of survival.

SEQUELAE OF THERAPY

Direct consequences of therapy
The effect of radiotherapy on growth centers is well understood. The dose considered optimal for the eradication of tumor is above that of significant inhibition of growth.

The direct consequences of chemotherapy are better managed. As long as strict adherence to guidelines in management is maintained, myelosuppression can be kept to a tolerable level.

Problems with cognitive development
There is currently a great debate as to what degree cognitive development is impaired in children who have had central nervous system malignancies and standard therapy. Young children with supratentorial tumors who receive cranial irradiation are at highest risk for intellectual, academic, and emotional dysfunction.

FINAL COMMENT
The objectives of therapy in children should not be just survival, but survival with a functional central nervous system. Therefore, the greatest challenge to development of pediatric oncological therapy for children with central nervous system tumors is the functional result, in addition to the result of tumor remission.

Neuroblastoma

INTRODUCTION AND BACKGROUND
Neuroblastoma is one of the leading causes of cancer death in children. In spite of the advances in curability of hematopoietic and certain other solid tumors of childhood, significant improvement in the cure rate of neuroblastoma has remained elusive, except for very localized disease; and therefore as many patients as possible must be entered on cooperative study protocols in order to find more fruitful therapeutic regimens. This tumor has certain singular characteristics:

In situ finding in the adrenal glands of newborns and infants less than 3 months of age
Striking improved prognosis in patients under 1 year of age
Possibility of transformation to a benign tumor
Secretion of catecholamines
Presence of specific surface antigen markers

All of the above require continued and intense study of the biology of this tumor.

INCIDENCE
8% – 10% of all childhood tumors
1:10,000 births
One half of all cases are in children less than 2 years of age
Three fourths of all cases are in children less than 4 years of age

RISK
High: Children with neurofibromatosis
Opsoclonus, polymyoclonus and heterochromia
Minor: Fetal hydantoin syndrome
Familial transmission is rare

PATHOGENESIS
Pathogenesis arises from embryonal sympathetic neuro tissue, (except esthesioneuroblastoma).

DETECTION AND DIAGNOSIS

Clinical detection
Mass
Mass may represent the primary or metastatic distribution, usually abdominal, lymph nodes or skin.
Neurological
Weakness, limpness, nontraumatic extremity pain or paralysis ("dumbbell" lesion into spinal canal)
Pain
In bone and joints
Orbital signs
Ecchymosis and proptosis; opsoclonus with polymyoclonus
Other
Hepatomegaly, Horner's syndrome, chronic unexplained diarrhea or hypertension, heterochromia, weight loss

Screening
There is no single reliable screening test. The urine spot test is no longer felt to be reliable. Physicians and other health care professionals should be taught how to perform an adequate abdominal examination, particularly on infants and small children. Isolated determinations of VMA and HVA excretion in the urine may not rule out neuroblastoma, as only 70% to 80% excrete these metabolites.

Diagnostic procedures
Facilities should be available to perform: CBC, platelet count, urinalysis and 24-hour screening for VMA, HVA dopamine, metanephrines; chest x-ray, skeletal survey, IVP/abdominal sonogram/and or abdominal CT scan, bone scan, bone marrow aspirate and biopsy, electron microscopy, lumbar puncture and cytospin. Other useful tests include carcinoembryonic antigen, urinary cystathionine, myelogram or MRI for intraspinal tumors, neuron-specific enolase.

CLASSIFICATION
Anatomic: Posterior, mediastinal, adrenal or abdominal sympathetic ganglia, other

HISTOPATHOLOGY
Ganglioneuroblastoma—partially differentiated
Neuroblastoma—undifferentiated. This may be further subclassified by a trained pediatric pathologist according to Shimada classification: mitotic and karyorechtic indices, degree of neuronal differentiation, number of rosettes and degree of necrosis.

ANATOMIC STAGING
TNM system is based on the assessment of the extent of the tumor (T), the condition of the regional nodes (N), and the absence or presence of distant metastases including (M) nodes beyond the regional nodes (8).
Staging workup: See above. Refer to staging schema of Evans et al (9).

PRINCIPLES OF THERAPY

Surgery
Biopsy if preoperative studies are not adequate for diagnosis, explore for occult primary, place clips for XRT ports "second look" procedure.

Radiation
Spinal cord compression or respiratory compromise, mass effect in Evans' stage IV disease, pain palliation, total body for transplant.

Chemotherapy
Has been disappointing, although vincristine, cyclophosphamide, DTIC, melphalan, cis-platinum, and Adriamycin individually and in combinations have produced temporary regression of tumors in 75% of patients. It may be useful to produce remissions in stage III and IV disease, with debulking effect where mass is a problem and in certain cases in conjunction with radiation. The primary therapeutic challenge in this tumor is the control and cure of stage III and IV disease.

Toward this goal, autologous or allogeneic bone marrow transplantation following marrow purging with tagged monoclonal antibodies is currently under investigation.

AREAS FOR FUTURE THERAPEUTIC RESEARCH
More reliable and simple screening tests to detect this congenital tumor early, as infants younger than 1 year have a more favorable prognosis. Maturation-inducing agents, as this tumor has a high incidence of spontaneous maturation; use of retinoic acid, and use of monoclonal antibodies.

FIVE-YEAR SURVIVAL
Stage I disease 60%-70%; Evans stage II and IVS 40%; stage III 20%; and stage IV less than 5%.

Wilms' tumor (nephroblastoma)

INTRODUCTION
Wilms' tumor is the second most common solid tumor (outside of the central nervous system) in children. It is a tumor of the kidney. The incidence is 7.8 per million population, ages 1–14 years. The observed incidence in Harris County, Texas, was 0.79/100,000 children less than 14 years of age.

OCCURRENCE
6.1% of all cancer in white children
7.9% of all cancer in black children
500 new cases in the United States annually
77% are seen in children <5 years of age
90% are seen in children <7 years of age
Male:female ratio—0.9:2

GENETICS
Occurs in hereditary and non-hereditary forms
1% to 2% are familial
Hereditary form—autosomal dominant
Chromosome defects have been identified in many cases
Association with congenital anomalies:
- Aniridia
- Hemihypertrophy
- Multiple pigmented nevi
- Cryptorchidism
- Hypogonadism
- Gonadal dysgenesis
- Hypoplasia, fusion, ectopia of kidney
- Duplication of collection system
- Hypospadias

DIAGNOSTIC EVALUATION
The ideal time to refer a child with a suspected Wilms' tumor is at the time an abdominal mass is palpated. This ensures that diagnostic studies and surgery will include consideration of the anatomical and pathological staging, which has great prognostic importance.

Intravenous pyelogram is still the mainstay of evaluating these cases. The condition of the opposite kidney can be evaluated and presence of tumor in the inferior vena cava may be detailed. Chest radiographs may identify metastatic disease.

CT scan of the abdomen and chest may provide more details but can be misleading. CT scans of the lung may detect lesions that are too small or too peripherally located to be seen on routine radiographs.

Ultrasound of the abdomen is a useful technique for identifying a non-functioning kidney, cystic kidneys, involvement of the vena cava, involvement of retroperitoneal lymph nodes,

and may aid, in right-sidcd lesions, in separating the kidney from the liver.

STAGING
I—Restricted to kidney, inside renal capsule
II—Penetration into capsule, but no residual disease at surgery
III—Involvement of perineal tissue, intra-abdominal lymph nodes
IV—Distal metastases
V—Bilateral disease (5% of all cases)

SURGICAL EVALUATION (to include staging of tumor)
Excision via transabdominal, transperitoneal approach
Exploration of opposite kidney (open Gerota's fascia)
Biopsy of selected lymph node area (not radical dissection)
Hilar node
Periaortic node
Iliac node
Celiac node
Mark suspicious areas with clips (mark area outside of usual field of irradiation)

PATHOLOGICAL EVALUATION
Adequate pathological evaluation requires a pediatric pathologist
Favorable or unfavorable histology
(Use National Wilms' Tumor Pathology Reference Laboratory)

CHEMORADIOTHERAPY
Recommend referral to National Wilms' Tumor Study via pediatric cancer center. This will ensure that the patient will receive the most current therapy with available chemotherapy. Access can be achieved via any member of the two national pediatric cancer study groups: Children's Cancer Group (CCG) or the Pediatric Oncology Group (POG). Depending upon the stage, treatment includes: surgery, radiotherapy, actinomycin D, vincristine, Adriamycin, and cyclophosphamide.

PROGNOSIS*
The major prognostic factors are stage and histology. The typical Wilms' tumor is a mixed tumor of mesodermal elements of various degrees of differentiation, which is referred to as "favorable histology." Anaplastic changes alter this to unfavorable histology. Clear cell sarcoma is still considered to be a Wilms' tumor variant but is probably a separate tumor. Rhaboid tumors are now considered to be separate, especially as they can occur outside the kidney.

Favorable histology

Stage	2 years, Relapse-free Survival, %	Alive, 2 years, %
I	91 ± 2	99 ± 1
II	–90	94–98
III	75–85	88–91
IV	66–80	86–92

*National Wilms' Tumor Study 3

Unfavorable histology

Stage	2 years, Relapse-free Survival, %	Alive, 2 years, %
I–IV	67 ± 4	79 ± 3
Anaplastic		
I	78 ± 14	78 ± 14
II	42 ± 17	57 ± 20
III	38 ± 29	27 ± 3
IV	43 ± 19	43 ± 19
I–IV	45 ± 8	55 ± 9
Clear Cell Sarcoma		
I	76 ± 12	100
II	75 ± 22	100
III	67 ± 27	67 ± 27
IV	——	——
I–IV	67 ± 9	84 ± 6

RESULTS
The results of optimal management are extremely good. The results outside of the cancer centers have been less so. Ideally, it is advisable to refer when a Wilms' tumor is suspected on physical examination. The emphasis is to give each patient the best chance of survival.

Childhood leukemia

INTRODUCTION
Remarkable progress has been achieved since the introduction of the first chemotherapy treatments for childhood leukemia more than 30 years ago. Since that time, acute childhood leukemia has become a model disease for potential curability of disseminated cancer with combination chemotherapy. This has been especially true for the most common variety, acute lymphocytic leukemia (ALL), for which potential long-term survival has been possible since the late 1960s. Only in more recent years has similar though less dramatic progress been realized in the less common acute myelogenous or non-lymphocytic leukemias (AML, ANLL). Until the mid-1970s, the essentials in diagnosis of childhood leukemia were merely to separate the condition into one of the two categories, ie, ALL versus AML, since there were only two available treatment strategies. However, this is no longer sufficient, since subclassification, especially in the former category, is essential for assignment of prognosis and appropriate therapy.

The treatments for this group of diseases are still in a process of evolution, as our ability to apply combination chemotherapy strategies becomes more sophisticated. Therefore, "state-of-the-art" care implies active participation in clinical research, through protocol studies addressing one or more therapeutic or biologic questions. The objective is to build upon the progress of the past 25 to 30 years to achieve steady improvement in the proportion of long-term leukemia-free survivors, currently projected to be at least 50% of newly diagnosed cases.

Optimal care for these children demands a multi-disciplinary

approach with the pediatric hematologist-oncologist functioning as the "quarterback" of the team, providing the final plans for supportive and specific therapy, utilizing support services, and taking advantage of the skills of the referring family physician or pediatrician. Among the members of the team who are vital to the patient's treatment are specially trained laboratory technologists, oncology nurses, specialists in social work, child life and nutrition, as well as a number of subspecialists in the areas of surgery, radiation therapy, infectious disease, etc.

Widespread publicity suggesting that childhood leukemia has been (or is about to be) completely beaten should not lead to a false sense of complacency or to a feeling that these patients can be managed by anyone, provided an appropriate treatment "recipe" is available. Expanding knowledge about the biologic aspects of the disease as well as variability among patients in their responses to medications and disposition of drugs has been gained through intensive study in regionalized clinics and research laboratories and has necessitated a growing complexity in patient management. Therefore, in the 1980s and beyond, modern therapy for childhood leukemia requires referral to an appropriate pediatric cancer center where such multi-disciplinary management is available. It is certainly never justified, with the potentially effective treatments available, for a primary family physician or pediatrician to take on the management of one of these children without an initial referral. Furthermore, the specialist in adult hematology-oncology sees a different spectrum of hematopoietic malignancies and rarely has the experience or back-up support to provide the necessary comprehensive care.

EPIDEMIOLOGY AND ETIOLOGY

Leukemia is the most common childhood cancer, constituting about 30% of all pediatric malignancies. There are 2,500–3,000 new cases per year in the US. Leukemia may occur in children of any age from early infancy through adolescence. However, for reasons yet to be determined, especially in ALL, there is a marked age predominance of onset in the pre-school group with a peak at 3 to 4 years. There is a slight increase in males over females (1.3:1), and whites tend to be affected more frequently than do blacks. The specific cause or causes of leukemia in childhood remain to be determined, but it appears that there is a combination of genetic and environmental factors at work. In certain circumstances, there may be a strong genetic component as evidenced by the markedly increased frequency of leukemia in children with Down's syndrome and other more rare genetic disorders (eg, Fanconi's anemia and Bloom's syndrome). However, in the majority of cases there is no clear-cut familial pattern; and though viruses, radiation, drugs, and chemicals have all been implicated, no specific causal factor has yet been determined. Additional evidence in favor of genetic damage leading to leukemogenesis is the observation of non-random chromosome abnormalities seen in many leukemia patients' malignant cells. A number of differential patterns of chromosome abnormality exist, some of which seem to indicate the translocation and/or activation of latent oncogenes. This is an area of intense research which will likely have an impact on the clinical treatment and/or prevention of leukemia in years ahead.

PATHOPHYSIOLOGY

The vast majority of leukemia cases in children represent diseases of bone marrow origin in which a hematopoietic stem cell undergoes a malignant change and causes an accumulation in the bone marrow of poorly differentiated blast cells. The exact stem cell of origin in many cases remains to elucidated, though in the majority of patients with ALL, it seems quite clearly to be one with lymphoid potential. What is common to all the acute leukemias of childhood is that the cells which gradually replace the normal bone marrow elements are relatively fixed at an immature and non-functional state of differentiation. It is very rare for one to identify in children chronic leukemias in which more mature cells predominate, these cases numbering at most 1% to 2% of the total. As the leukemia process evolves, the bone marrow architecture is gradually replaced by malignant blast cells at the expense of normal hematopoietic elements. The consequences of this process lead to the symptoms and signs of the disease which reflect a combination of bone marrow failure and organ infiltration.

In a significant minority of cases, the leukemic process may involve the bone marrow secondarily, having an origin in extramedullary tissues such as lymph nodes or especially the thymus gland. In some of these cases, the distinction between acute leukemia and disseminated lymphoma is somewhat vague.

There is considerable variability in the presenting clinical and hematopoietic signs in patients with leukemia based upon the rapidity of leukemic cell growth, the particular cell of origin, and the sites in which the disease activity tends to predominate.

It is important to note that as many as 50% of leukemia patients present with white blood cell counts below 10,000/cu mm, and only a small minority have very high white blood cell counts at diagnosis. For a patient to have leukemia and a normal complete blood count at diagnosis is extremely rare, occurring almost exclusively in those patients whose disease process begins as a lymphoma outside the bone marrow. Skilled examination of the peripheral blood smear in children with leukemia almost always identifies the presence of circulating blast cells.

SYMPTOMS AND SIGNS OF LEUKEMIA / WHEN TO SUSPECT THE DIAGNOSIS

Childhood leukemias are usually symptomatic at diagnosis. It is very rare for them to be encountered incidentally on routine examination on the basis of findings such as pallor, enlargement of the spleen, or identification of an unexpected mediastinal mass on a chest radiograph performed for some other reason. In general, the disease process manifests itself with a combination of features resulting from two processes, bone marrow failure due to replacement by leukemia cells, and infiltration of numerous organ systems by the blast cells.

Bone marrow failure

The picture of bone marrow failure in a child with leukemia is variable but usually includes evidence of anemia, neutropenia, and thrombocytopenia. The anemia manifests as pallor, lack of energy, and the other symptoms characteristic of anemia;

it is usually of gradual onset as evidenced by a fairly well-compensated cardiovascular system, in spite of sometimes severely depressed hemoglobin values. Since this occurs in response to bone marrow failure, the reticulocyte count is invariably disproportionately low for the degree of anemia.

Neutropenia and other granulocyte deficiencies predispose the patient to recurrent fevers and to infections, especially of the skin and respiratory tract, which fail to respond well to courses of conventional antibiotic therapy.

Thrombocytopenia presents symptoms of easy bruising, petechiae, and epistaxis, often aggravated by aspirin administration.

Infiltration of tissues and major organ systems by leukemia blast cells

Bone and joint pain of insidious onset, often migratory and occasionally with actual swelling around the joints, are frequent symptoms of leukemia. Occasionally the pain is extremely severe and may reflect infarction due to blast cells interfering with the circulation. Painless lymphadenopathy, especially in the cervical region but in any site, is also frequently seen though is not an invariable manifestation of the leukemic process. A mass in the thymus gland is seen in 7% of newly diagnosed patients with ALL and usually reflects a T-cell leukemia; much rarer is a tumor mass in the abdomen in a patient with a frankly leukemic blood picture. Enlargement of the liver and especially the spleen are common manifestations of the disease. Much less common at diagnosis is the presence of testicular involvement as noted by painless induration of one or both testes, or involvement of the central nervous system with cranial nerve pulses and/or evidence of increased intracranial pressure.

EVALUATION AND INITIAL MANAGEMENT OF THE PATIENT SUSPECTED TO HAVE LEUKEMIA

The most crucial laboratory test when the diagnosis is suspected or incidentally discovered is a complete blood count with careful review of the peripheral blood smear. While occasional cases may present with isolated anemia, neutropenia, or thrombocytopenia, it is much more frequent for at least two, if not all three, cell lines to be affected by the process. The following combinations of hematologic and clinical features should lead to a very high index of suspicion:

- Anemia with lymphadenopathy and/or splenomegaly, not clearly associated with viral illness or hemolysis, respectively
- Anemia with unexplained bone and/or joint pain
- Any combination of two or more of anemia, neutropenia, and thrombocytopenia
- Anemia and/or thrombocytopenia with an apparent lymphocytosis; the very compact blast cells characteristic of childhood ALL may often be misinterpreted by inexperienced laboratory technicians or physicians as lymphocytes
- Severe anemia at any age or mild to moderate degrees of anemia beyond 18 months of age should never be blamed on simple iron deficiency unless there is compelling supportive evidence. The possibility of leukemia should always be considered under these circumstances.

Cervical lymphadenopathy with mediastinal mass is strong evidence of the possibility of leukemia and warrants bone marrow examination prior to any surgical biopsy of nodal tissue

When the physician encounters a child with any of the above features, the next logical course of action is to place a call to a regional pediatric cancer referral center to discuss the case with a consulting pediatric hematologist/oncologist. At that time, the primary physician and subspecialist can discuss the merits of further evaluation by the primary physician versus an early referral. The primary physician's main job at this stage is to have a high index of suspicion of the diagnosis, to attend to the patient's needs for stabilization if there is significant associated illness, and to deal with potentially life-threatening complications.

The bone marrow examination is, of course, the definitive test in confirming the diagnosis of leukemia in childhood, but in most cases it is not necessary for this test to be performed in the referring hospital to "complete the work-up." All too often this test is done unnecessarily when it will only need to be repeated for the performance of laboratory subclassification prior to therapy in the cancer center.

CLASSIFICATION OF CHILDHOOD LEUKEMIAS

As mentioned above, chronic leukemias in which differentiated cells predominate are extremely rare in childhood and limited mainly to chronic myelocytic leukemia of either the infant or so-called adult types. Chronic lymphocytic leukemia in childhood has been reported extremely rarely. Thus, the vast majority of leukemia cases are classified as acute based on the predominance of blast cells in the bone marrow.

Acute lymphocytic leukemia (ALL)

Approximately 80% of childhood cases fall into this category. There are three morphologic subtypes identified by the appearance of the blast cells under the microscope, L_1, L_2, and L_3. The vast majority of ALL cases represent malignant changes in primitive lymphoid elements that are committed to differentiation along the B-cell pathway. Most express a surface antigen (common ALL antigen, CALLA) that is characteristic of lymphoid stem cells. Additional immunologic and genetic factors indicate their differentiation along B-cell lines. A significant minority, in fact, express immunoglobulin production in their cytoplasm (pre-B cells); and an even less frequent subpopulation express immunoglobulin on their surface (B-cells). On the other hand, a minority of ALL cases, approximately 15%, are malignancies of T-cell (thymus derived) lineage. Many, though not all of these, appear to have their origin in a tumor mass in the thymus gland with bone marrow involvement occurring secondarily. The lymphoblasts in the B-lineage ALL, as opposed to the T-lineage ALL, may not be distinguishable morphologically under the microscope or by cytochemical features. However, their distinction on immunologic grounds is of major importance, since the response to therapy and prognosis differs considerably between these categories.

Acute myelogenous leukemia (AML, AMLL)
Though constituting only 15% to 20% of acute childhood leukemia cases, this is also a heterogenous group of disorders sharing a common feature, namely that the malignant cell expresses evidence of myeloid and/or monocytic differentiation. Important categories within this class include rare subtypes associated with significant, unique clinical features. For example, leukemia of pure monocytic type characteristically occurs in infants, is often associated with a coagulopathy, a very high white blood cell count, and a poor prognosis. A rare subtype in which pro-myelocytes predominate has a remarkable tendency to induce a consumption coagulopathy and severe bleeding either before or shortly after treatment. Finally, a recently recognized subtype occurs in primitive platelet-producing cells (acute megakaryoblastic leukemia) and may be undistinguishable morphologically from cases of ALL. These patients' clinical behavior, however, is quite different, and it seems increasingly important to be able to identify them at the outset so that appropriate treatment may be offered.

Special diagnostic studies are necessary to clarify the broad distinction between ALL and AML and to further subclassify within these two categories. The definitive testing is performed on bone marrow cells aspirated prior to therapy. These cells are analyzed morphologically and cytochemically, in search of characteristic features which identify their origin, immunologically to determine the cell line that predominates, and also for cytogenetic abnormalities. As mentioned above, an increasing number of non-random chromosome abnormalities are being identified in both ALL and AML, many of which have a bearing on prognosis and which will probably influence therapy in the near future. In selected cases where the diagnosis and classification are difficult, special additional studies include electron microscopy for platelet peroxidase and measurement of terminal deoxynucleotidyl transferase and other chemical markers.

Cerebrospinal fluid cytology following a cytocentrifuge preparation and careful staining is important, since approximately 3% to 4% of ALL and a somewhat larger percentage of AML cases may have involvement of the central nervous system at diagnosis, again a factor which dictates the nature and intensity of therapy.

Other studies which are essential at diagnosis include those in search of compromise to other organ systems, such as measurements of renal and liver function, determination of uric acid level, and, in those cases where there appears to be a risk for unusual problems, studies of coagulation and biochemical features such as calcium and phosphorus. It does not appear from recent research that diagnostic imaging studies are necessary, other than a routine chest x-ray to rule out a mediastinal mass. In particular, skeletal surveys and abdominal ultrasound studies, while providing information about the extent of disease, seem to have little bearing on treatment planning.

PROGNOSTIC FACTORS

For many years, the most critical factor at diagnosis was the distinction between ALL and AML, since the therapies used at the outset were so vastly different. Furthermore, the prognosis for ALL began to improve dramatically in the 1960s, while that for AML has begun to progress only since the late 1970s and has yet to catch up with that of its more common counterpart. However, as the recognition of clinically relevant subsets has become more sophisticated, it appears that there are categories within the patient population of ALL which in fact have a worse prognosis than some patients with AML.

Among those diagnosed to have ALL, the most reliable clinical prognostic factors which have stood the test of time are the age and white blood cell count at diagnosis. Patients who are under 1 year of age or who are over 10 years of age tend to fare worse than those in the 1-to-10-year age bracket. The higher the WBC at diagnosis, the worse the outlook. This does not reflect delay in diagnosis but more often the aggressiveness of the disease process. Chromosome abnormalities in the leukemic cells have a significant relationship to prognosis. Certain patterns are indicative of a poor outlook, while others have an association with dramatic treatment response. In addition, marker chromosomes identified in certain cases may predict outcome. Of particular importance here is the rare phenomenon of the Philadelphia chromosome, which seems to be associated with leukemia that is very rarely curable with chemotherapy. A recent prognostic factor identified among ALL patients which may affect therapy significantly in the future is evidence that there is significant variability among patients in the way their systems handle anti-leukemic drugs. As yet, this has not reached a stage of individualizing treatment among patients, but this may follow in the near future.

Much has been written about the immunologic markers identified on leukemic lymphoblasts, and it is now clear that the best prognosis is seen in those patients with early B-lineage ALL. As the cell progresses further down the pathway of B-cell differentiation, the prognosis becomes steadily worse and is dismal if treated as other childhood leukemias in those with full-fledged B-cell disease, most of whom are clinically very similar to children with advanced lymphomas of so-called Burkitt type. Patients with T-lineage ALL, while not faring as poorly as those with fully differentiated B-cell disease, have a much more aggressive and resistant form of leukemia than do those with the characteristic disease of early B-lineage. Based upon recent clinical trials, it seems that different therapies for ALL patients are warranted for those with early as opposed to later degrees of B-cell differentiation and also for those with T-cell disease.

Among patients with AML, once again age and white blood cell count carry significant prognostic weight, as do morphologic subtypes mentioned above. Of particular importance is the relationship between the monocytic subtype, a high white blood cell count, and presentation in infancy. In addition, a number of chromosomal markers are identified, some associated with a relatively poor, others with a more favorable treatment response.

PRINCIPLES OF TREATMENT

Treatment for childhood leukemia can be divided into supportive measures and specific measures to control the leukemia.

Supportive measures
In this area, the family physician or primary pediatrician who

initially encounters the patient has a significant role to play. At the time of initial assessment, a determination needs to be made concerning the urgency of intervention for management of anemia, infection, and bleeding. In addition, attention needs to be given to the patient's state of hydration, renal function, and the possibility of uric acid nephropathy, which occurs especially in those with B- or T-cell disease, or those with very high white blood cell counts. Since most primary physicians will have little experience in managing such problems, the advice of a consulting pediatric hematologist should be sought as soon as possible to determine the urgency of supportive measures prior to more specific diagnostic testing and treatment.

Specific treatment
The treatment of the acute childhood leukemias has been based for a number of years on principles of combination chemotherapy using multiple drugs in a carefully timed sequence. As a result of several clinical trials dating back to the early 1960s, the treatment is now divided into well-defined phases of remission induction, consolidation, and continuation or maintenance. Most treatment programs, regardless of the underlying disease, are of two to three years in total duration, though studies are under way to determine the optimal treatment length in various subtypes of leukemia. After the initial remission induction phase is well under way and the patient's leukemia is responding, every effort should be made to manage the child as much as possible in an outpatient environment and as close to home for as much of the time as possible. In this situation also the primary physician may have a significant contribution to make to minimize the number of trips to and from the cancer center. As mentioned above, it is important not only to distinguish ALL from AML but also to identify categories within these two broad groups for assignment of treatment. At present, among those diagnosed to have ALL, it is clear that several different treatment protocols are warranted based upon the following clinical and/or laboratory determinations:

ALL of early B-lineage
: Separate treatments are needed for those with a favorable prognosis and those with an unfavorable prognosis, including those with pre-B disease.

B-cell ALL
: Clinically, these patients resemble children with advanced lymphomas of Burkitt and related cell types and should be treated on protocols for that category of disease.

T-cell ALL
: Patients with thymus-derived disease are treated on programs derived from those which have proved successful for advanced stages of lymphoblastic lymphoma.

Infants under 1 year of age with leukemia of any subtype
: This is yet an additional, clinically distinct subset for whom specific treatment objectives are separately addressed.

AML
: The treatment for this category of disease has not reached a degree of sophistication to warrant separate therapies on the basis of clinical or biologic prognostic factors. At this time, the treatment programs are based upon extremely intensive multiple drug chemotherapy, usually delivered over periods of time ranging up to 18 to 24 months and often requiring repeated hospitalizations and a much more disruptive lifestyle than in the case for patients with ALL in remission on maintenance chemotherapy.

Management of patients with recurrent leukemia or those who fail to respond to treatment
Children who fail to attain an initial remission or who relapse early in the course of their disease have a very poor prognosis, regardless of the specific diagnosis originally made. For these children, chemotherapy strategies produce only temporary responses, and long-term survival is exceptional. It is for such patients that investigational protocols, new drugs, or entirely revolutionary treatment strategies are clearly justifiable. On the other hand, those experiencing very late relapse, especially more than a few months after completion of all therapy, may be re-treated successfully with therapy programs similar to those used at the outset.

Bone marrow transplantation
The transplantation of healthy bone marrow to an individual with leukemia has been applied for a number of years with limited though encouraging success in certain patient populations. It is being evaluated for children who have sustained at least one relapse of their leukemia, those whose chromosome constitution is extremely poor (ie, Philadelphia chromosome), and, in the view of several investigators, patients with AML who are in the first remission of their disease, since more than half of those children will relapse even with intensive chemotherapy. Though rare, chronic myelogenous leukemia in the chronic phase of the disease seems to be a suitable indication for bone marrow transplantation, provided a suitable donor is available. Thus far, the encouraging results in marrow transplantation, reporting survivals of 30% to 50%, have been attained in those patients whose clinical condition is good in spite of their long-term prognosis and for whom a suitably matched bone marrow donor is available (almost invariably an HLA-matched sibling). The recent applications of transplantation from donors who are mis-matched or the use of the patient's own remission bone marrow in the transplantation procedure remain highly experimental though interesting treatment modalities which may have greater application in the future.

CURRENT TREATMENT RESULTS

Acute lymphocytic leukemia
With an appropriate combination chemotherapy regimen, approximately 95% of children with ALL will attain a complete remission (disappearance of measurable leukemia, recovery of marrow function, and a good state of health) within three to six weeks of diagnosis. As a group, 50% to 60% may be expected to remain permanently disease-free with potential for cure. Those falling in the poor prognosis categories of T-cell, B-cell, infants, or patients with white blood cell counts in excess of 100,000/cu mm have had a reported two- to three-year

disease-free survival of less than 30%. However, these patient groups, as mentioned above, are subjects of new strategies employing new drug combinations as well as other treatment approaches, and preliminary data suggest that improvements are indeed being achieved.

Acute myelogenous leukemia

Approximately 80% of patients with AML attain a complete remission. To achieve this initial objective, the therapy is often more intense than that used to achieve a similar response in ALL patients. There is therefore considerably more toxicity and a greater risk for early death from complications, including infection. Unfortunately, many children with AML continue to relapse in spite of intensive chemotherapy, and long-term disease-free survival can be expected for at most 30% to 35%. Though controversial, bone marrow transplantation when a suitable sibling donor is available seems to provide a better than 50% likelihood for cure if the transplantation is performed early in the patient's course.

It is important to emphasize that most children in continuous complete remission of their leukemia can and should be encouraged to live nearly normal lives with regular attendance at school and participation in sports and other activities. Intercurrent illnesses, infections, and periods of intensive treatment may require temporary interruption of these normal activities; but as the objective for treatment continues to be long-term healthy survival, every effort should be maintained by the treatment team to normalize the lifestyle of the child and family to the extent that it is possible.

Concerns exist regarding the long-term quality of life among patients apparently cured of leukemia. These concerns are having an increasing impact on the design of new treatment programs as we learn of the effects of past therapies on long-term survivors. For example, we now know that cranial irradiation, used to prevent central nervous system leukemia in most treatment protocols until the late 1970s, is associated with an increased risk of learning disabilities when delivered to children under the age of 5 years. This has led to a modification of protocols such that radiation is now used selectively, only in those with a very high risk for CNS leukemia. It seems that periodic intrathecal injections of anti-leukemic drugs is sufficient in the majority of cases. Other areas of concern include potential effects of therapy on growth and development, the possibility of second malignant tumors developing in patients apparently cured of their initial cancer, and the impact that treatment of childhood cancer will have on the individual's subsequent mental health, social acceptance, and productivity in society.

ROLE OF THE PRIMARY PHYSICIAN IN CHILDHOOD LEUKEMIA MANAGEMENT

It is with the family physician or pediatrician that the patient with leukemia first encounters the healthcare system. It is important that this physician have a high index of suspicion and initiate a prompt referral to an appropriate pediatric cancer center when leukemia is a strong possibility. Such physicians, who infrequently are exposed to children with cancer, should avoid potential pitfalls primarily associated with failure to consider the diagnosis. Such pitfalls include delays in diagnosis due to the injudicious use of therapeutic trials of iron in children with unexplained anemia, the tendency to overlook symptoms of bone and joint pain as being insignificant or being due to trauma or other diseases such as rheumatoid arthritis, and a tendency to use prolonged courses of oral antibiotics to no avail in patients with fever of unknown origin. Finally, an unnecessarily delayed referral is often the result of inexperience in examining blood smears, leading to failure to identify blast cells in patients with lymphocytosis.

When the diagnosis is suspected or made, the primary physician has an essential role in taking action to stabilize the patient, dealing with infectious or bleeding complications, and transfusing the patient carefully. However, it must be emphasized that telephone consultation with a pediatric hematologist-oncologist is desirable before any such measures are taken. As the physician with whom the patient and family have an established relationship, the primary caregiver has a vital role early in the treatment course to provide emotional support and reassurance that effective treatment is available and will be provided with a minimum of delay.

Once the specific diagnosis has been made and an appropriate treatment determined, the primary physician has a further important contribution to make as an active participant in the administration of protocol therapy. The degree of his or her involvement will vary according to the distance that the patient lives from the referral center, the intensity and experimental nature of the therapy to be administered, and the preference of the individual patient and physician.

In remission, the bulk of the patient's therapy can be given at home under the watchful eye of the primary care physician. An active role in the conduct of clinical research is encouraged by asking the physician and his or her staff to complete data sheets and provide information on drug dosage and laboratory reports, so that the patient's trips to and from the center may be kept to a minimum. Strict adherence to the guidelines of the protocol is essential if the best result is to be achieved. Therefore, close contact needs to be maintained with the pediatric oncologist when questions arise. It is inadvisable to withhold or postpone therapy without a clearly justifiable reason. In addition, attention to the medical needs of other family members, especially with respect to potentially contagious illnesses such as varicella, is an important responsibility of the primary physician.

Finally, for those patients whose treatment is ultimately unsuccessful, the primary physician may have an important role in providing supportive care during the terminal stages of the illness so that the patient may remain in the home environment. For most families, if death is inevitable, management close to home is preferable, and the primary physician can make an invaluable contribution during this demanding time.

SUMMARY

Childhood leukemia is a heterogenous group of diseases with multiple presentations and clinical manifestations. Though a rare condition, it should never be completely out of the mind of the physician caring for children, so that diagnosis and prompt treatment can be initiated when it is encountered.

Primary care physicians have an initial responsibility to suspect the diagnosis early, to perform only the essential laboratory studies to clarify the condition, and to make an appropriate referral to a pediatric cancer center. Later, the physician's role is important in treatment and follow-up in the child's community, where continuity of care to minimize cost, inconvenience, and stress on the patient and family is desirable. With the appropriate multidisciplinary team effort, the vast majority of childhood leukemia victims can return fairly readily to a good state of health within a few weeks, and more than 50% of them have a chance to lead healthy and productive lives and perhaps be cured of their malignancy.

Childhood osteosarcoma

INTRODUCTION

Osteosarcoma is the seventh most common cancer in children but has an incidence of only 2.9 per million white children and 4.0 per million black children. The relative survival at five years has changed from 26% in 1967–1973 to 43% in 1973–1981. This would appear to be secondary to (1) more prompt and accurate diagnosis, (2) thorough evaluation, and (3) treatment by a multidisciplinary pediatric oncology group. The rarity of the diagnosis mandates an awareness of the condition by the primary medical provider, the ability to obtain adequate diagnostic studies appropriate to the condition, and then treatment by someone versed in oncologic care of children with appropriate therapies which are current state-of-the-art. Although statistical considerations may guide general therapy, each individual must be regarded as unique and treated in the most appropriate manner.

DIAGNOSTIC GUIDELINES

The diagnosis of osteosarcoma must begin with the awareness that such a cancer could be the etiology of the presenting clinical picture. The increased possibility of osteosarcoma in certain conditions must also be considered.

Initial diagnostic procedures are expected to indicate the nature and extent of the tumor and the site of the primary tumor. Initial radiographic studies may confirm the clinical impression. Further non-invasive diagnostic procedures should then be done in collaboration with members of the management team. Invasive diagnostic procedures (biopsy) should be deferred until all non-invasive (CT scan, MRI, radionuclide scans, etc) studies are performed. The decision to do diagnostic procedures on a local basis may be deferred to a pediatric cancer center so that the patient is not subjected to repetitive time- and money-consuming and uncomfortable procedures. Diagnostic biopsy is best performed where adequate tissue evaluation methodologies (electron microscopy, stains, etc) are immediately available.

The exact non-invasive procedures to be done on each patient will need to fit to each individual. The various modalities for evaluation may be available, but the interpretation would best be by someone more familiar with childhood cancer. With rapidly changing diagnostic procedures, the most precise information should be made available to the patient. Appropriate procedures may vary in timing and importance, but determining the exact extent and nature of the tumor should be the same end result.

Biopsy should be considered by someone familiar with the biologic nature of the tumor and the various modalities of treatment available. Correct biopsy technique is essential for optimal therapeutic considerations.

THERAPEUTIC GUIDELINES

Improved survival of children with osteosarcoma has resulted from treatment with standardized protocols by individuals experienced in the delivery of such treatment.

Specific therapeutic guidelines will concern tailoring a standardized protocol to the individual's tumor location, size, general health, and current status of investigative procedures such as limb replacement. Therapeutic modalities include ablative or resective surgery, limb replacement, chemotherapy, and radiotherapy. Because of the rarity of osteosarcoma, progress in therapeutic modalities may only be available in a referral center. A combined program of local and referral center diagnostic and therapeutic plans should be available to avoid duplication of effort and expense and to offer optimal therapy in a familiar milieu.

Rhabdomyosarcoma and soft tissue sarcoma

INTRODUCTION/BACKGROUND

Cancer in a child is rarely encountered by the primary care physician and medical and surgical specialist. Yet malignant disorders constitute the most common medical cause of death among children. Rhabdomyosarcoma and related soft tissue neoplasms are the sixth most common type of childhood cancer. Over 300 children in the United States each year are diagnosed as having one of these tumors, and the site of the primary and stage of the disease can be highly variable. Given the extreme rarity and heterogenous nature of these tumors, as well as their unpredictable but usually aggressive nature (with a uniformly high case fatality rate in patients receiving inadequate therapy), it is vital that affected patients (1) be promptly and accurately diagnosed, and (2) be immediately referred to a pediatric cancer center with an experienced multidisciplinary team available to treat the patient according to a standard treatment protocol. Each patient must be considered a research subject in order for continued treatment advances to be made. Whereas rhabdomyosarcoma was once uniformly fatal, now over half the affected children can be successfully treated.

DIAGNOSTIC GUIDELINES

Rhabdomyosarcoma and soft tissue sarcomas are the most common malignant tumors of the head and neck and lower genitourinary tract in children and adolescents. Therefore, any unusual mass lesion in these areas should raise concern. Rhabdomyosarcoma may occur in nearly any site of the body, including the extremities, chest, biliary tract, and retroperitoneal space.

If a child or adolescent develops any of the following signs or symptoms, the diagnosis of rhabdomyosarcoma should be strongly suspected. It is advisable at this time that the child be promptly referred to a cancer specialist at or associated with a

major treatment center in order for nccessary diagnostic tests to be carried out. In many cases, the timing, site, and size of the biopsy have a major effect on the overall outcome.

Mass lesion on the face, in the oral cavity, or on the scalp
Proptosis or any other evidence of a mass in thc orbit or around the eye
Evidence of a mass lesion in the nasopharynx or sinuses
Mass in the middle ear
Mass in the larynx, causing stridor, respiratory obstruction, or other symptoms
Painless mass in the scrotum
Acute urinary obstruction with evidence of a mass on rectal examination or routine radiographic studies
A vaginal mass
Obstructive jaundice due to a mass in the biliary tree
Any unexplained and persistent or growing mass in an extremity
Any retroperitoneal mass

Although patients should ideally be referred to a pediatric cancer center for biopsy, sometimes a biopsy may have already been performed for one of a variety of reasons. If the histologic diagnosis is consistent with rhabdomyosarcoma, soft tissue sarcoma, or any other type of cancer, the child should be immediately referred—for further diagnostic studies and definitive therapy—to a major pediatric cancer center. It is imperative that delay not occur and that further detailed diagnostic and/or staging procedures not be carried out in the community hospital, for the following reasons:

1. On many occasions very special diagnostic studies, often of a research nature, need to be carried out on tumor tissue or actual tumor samples. These include electron microscopic, biochemical, and immunologic analyses. Results of these special tests are often correlated with treatment outcome as part of multi-institutional group protocol design. Unfortunately, if the biopsy is performed in the community hospital, no tissue often remains for these important tests.
2. Physicians may not be aware of the type of staging diagnostic studies which need to be performed on such children. Moreover, special radiographic tests such as CT scan, MRI, radionuclide scans, etc, may be performed differently in the cancer center than in the small community hospital, and the latter type of institution may not have a great deal of experience in performance and interpretation of these studies in pediatric patients. Thus, even if such studies are performed in the community hospital, they must often be repeated—at additional expense and discomfort to the patient—when he or she arrives at the cancer treatment center.
3. Many of these tumors are rapidly growing and may quickly result in obstruction, pain, or metabolic abnormalities. Also, there is evidence that prognosis is best when treatment begins shortly after diagnosis. Therefore, it is mandatory that prompt referral be carried out.
4. A pediatric cancer center is often much better equipped to provide supportive, psychosocial, and emotional care to the affected child and his or her family during the distressing days following the diagnosis of a potentially fatal disease.

It is important to stress that although children with rhabdomyosarcoma or soft tissue sarcoma should be referred to pediatric cancer centers for definitive diagnosis and initiation of therapy, much of the continued therapy, monitoring, and supportive care can often be provided by the primary care physician. In fact, this is often vital because of geographic and/or financial reasons.

THERAPEUTIC GUIDELINES

There are abundant data showing that children with cancer have a better outcome if their treatment is delivered according to a standardized investigational protocol and when their therapy is initiated and coordinated by a children's cancer treatment center. It has likewise been clearly shown that much of the treatment can be delivered by the primary care physician with just as good a result, no more toxicity, and greater cost-effectiveness than when all of the treatment is given at the cancer center. Specific therapeutic guidelines for rhabdomyosarcoma and soft tissue sarcoma include the following:

1. The treatment of these disorders is highly individualized and dependent upon location, stage of disease, and histology. As mentioned above, nearly all children should be treated according to a standardized cooperative group investigational protocol. Currently, the Intergroup Rhabdomyosarcoma Study represents the treatment protocol of choice for most affected children.
2. In general, treatment consists of initial surgical biopsy (or limited resection), an initial course of multi-agent chemotherapy, possibly a second surgical procedure, radiotherapy, and continued intensive chemotherapy. The total duration of therapy usually is one to two years.
3. Drugs used to treat children with rhabdomyosarcoma include cyclophosphamide, actinomycin-D, vincristine, doxorubicin (Adriamycin), cis-platinum, and VP-16. The drugs are often administered in combination and/or in a cyclic fashion. These agents may have severe and even fatal toxicity, so they must be administered by individuals skilled in cancer chemotherapy for children. Regular monitoring of disease activity and for toxicity of treatment is necessary. This includes blood counts on nearly a weekly basis, regular physical assessments, and periodic radiographic studies. Some of these tests and evaluations may be performed in the community hospital, but coordination should occur at the pediatric treatment center.
4. Regular communication between the cancer center and primary physician is extremely important to insure that adequate care is given.

Ewing's sarcoma

INTRODUCTION

Ewing's sarcoma (round cell tumor of bone) comprises approximately 1% of all childhood cancer. With a peak incidence in the second decade of life, it accounts for about 30% of all bone tumors in children. Its overall incidence is estimated at about 2 per million whites less than 20 years of age per year. The incidence in blacks appears to be much lower.

DIAGNOSIS

Initial signs and symptoms are very protean, and there are no pathognomonic radiologic lesions. A diffuse lytic lesion of the metaphyseal region of a long bone is the most common finding, although only 60% of the lesions of Ewing's sarcoma occur in long bones. The remainder occur in flat bones or very rarely as a soft tissue lesion. This rare tumor poses special problems, since it may mimic more common benign disorders like eosinophilic granuloma and osteomyelitis. Differentiation from the latter may be particularly difficult, since Ewing's may be associated with pain, fever, anemia, leucocytosis, and elevated sedimentation rate, all of which may suggest infection.

Open biopsy is the procedure of choice in obtaining tissue for diagnosis, as needle biopsy does not provide sufficient material necessary for precise diagnosis. The biopsy should be undertaken, however, only with careful attention to the following points:

- Selection of biopsy site can be facilitated by careful evaluation with CT scan.
- A small incision and tract is desirable.
- A resectable lesion can be converted to an unresectable one through contamination of surrounding tissue by faulty technique.
- A generous piece of tissue should be obtained without violation of the cortex, which greatly weakens bone. If necessary, a small round cortical defect is preferable to a larger one.
- A pathologist should be present to perform frozen tissue examination and determine that an adequate specimen has been obtained.

Pathological examination

Histologically, this tumor is made up of uniform small round cells with little or no surrounding stroma or lymphocytic infiltration, no reticulin fibers, frequently with areas of hemorrhage and necrosis. Although the presence of glycogen (periodic acid-Schiff positive material which digests with diastase) is considered to be a hallmark of Ewing's, it must be remembered that glycogen has also been observed in neuroblastoma, from which Ewing's must be distinguished histologically along with lymphoma and rhabdomyosarcoma. Therefore, routine special stains, such as those for glycogen and immunoperoxidase staining for neuron-specific enolase, examination by electron microscopy, and preservation of frozen tissue for additional studies are all desirable and may be essential for precise diagnosis.

Differentiation between Ewing's sarcoma, neuroblastoma, rhabdomyosarcoma and lymphoma may be difficult, even for the most experienced pathologist.

Other diagnostic studies

Since 15% of Ewing's cases can be expected to have metastases at the time of diagnosis, a bone scan, CT scan of lungs, and bone marrow examination are important. CT scan of the primary lesion helps determine the extent of disease at the site of biopsy as well as selection of the site. Urinary catecholamines may help exclude neuroblastoma.

TREATMENT

Because of the rarity of the tumor and the complexities of timing and execution of surgery, radiation therapy, and chemotherapy in these children, initial evaluation and implementation of a therapeutic protocol is best accomplished in a facility with pathologists, surgeons, oncologists, and radiotherapists working together from the outset. This multidisciplinary approach offers the greatest opportunity for cure and minimum risks from complications of treatment. Decisions regarding the feasibility of attempted complete resection versus initial chemotherapy followed by radiotherapy, as well as the timing of these modalities, require detailed evaluation and planning which can best be carried out in centers equipped for these kinds of therapy. In general, cyclophosphamide, vincristine, Adriamycin and dactinomycin, along with carefully planned radiotherapy, offer the best chance of survival with least residual complications of therapy.

The primary physician has an important role in assisting with chemotherapy, monitoring toxicity, and providing support to the family and patient; this role should not be minimized, but optimum treatment must come from cooperation among the whole cadre of physicians involved and from continued probing and analysis of all data related to these rare patients, who are treated by carefully planned and administered intensive therapy.

Retinoblastoma

INTRODUCTION

Retinoblastoma is a tumor that originates in the eye. It usually occurs before the second year of life but has been seen in newborn infants and in adults. It is the eighth most common pediatric malignancy in America, with an estimated 200 to 300 new cases occurring yearly in the United States. There is no difference in frequency between male or female or for black or white children. The annual incidence is 3.4 cases for each 1 million children under age 15 years. Over 90% of the cases are diagnosed before 5 years of age. About 30% of children with retinoblastoma have bilateral involvement, although not necessarily simultaneously. It is a relatively slow-growing tumor that remains contained in the eye for months or even years, but when it extends beyond the eye death ensues rapidly. In most cases metastatic retinoblastoma is fatal. It is not unusual for a child who has been treated for retinoblastoma to later develop another cancer, most commonly an osteogenic sarcoma.

EPIDEMIOLOGY AND ETIOLOGY

Retinoblastoma arises from neuronal elements in the retina. The endophytic type of retinoblastoma arises from the outer nuclear layer and causes retinal detachment. A tumor may also grow from the inner nuclear layers and present as a localized mass or masses that, at times, may be remarkably highly elevated. These tumors are frequently on a stalk resembling a mushroom and are referred to as an exophytic-type growth. The retinoblastoma is characteristically multicentric in origin, even when confined to one eye. Up to 84% of patients have been noted to have multiple foci of tumor. Retinoblastoma

exits from the eye via the systemic circulation and through the choroidal blood vessels into the orbit, or directly through the vaginal spaces and substance of the nerve into the central nervous system. Virtually all patients who die from retinoblastoma have involvement of the brain, and one half to two thirds show evidence of distal metastasis.

It has been recognized for many years that retinoblastoma follows a genetic pattern. It is almost always an autosomal dominant syndrome with virtually complete penetrance. All patients with bilateral retinoblastomas and 15% of patients with unilateral retinoblastoma harbor the germinal mutation for retinoblastoma.

Since more than 90% of patients have had no family history of retinoblastoma, it is felt that they represent the first mutation within the family. When patients with either unilateral or bilateral retinoblastoma have the germinal mutation for retinoblastoma, 50% of their offspring will be affected. A patient with unilateral retinoblastoma with no family history has a 7% chance of giving birth to a child with retinoblastoma.

The retinoblastoma gene is thought to be on the long arm of chromosome 13, because bilateral retinoblastoma is seen in patients who have a deletion of, or within, the long arm of this chromosome (deletion of some portion of the q14 band of chromosome 13). Depending on the degree of deletion in the q14 band on the long arm of the chromosome 13, other conditions may arise along with the retinoblastoma, including mental retardation, extra digits, abnormal dermagraphics, imperfect anus, and failure to thrive. This gene also causes increased risk of other tumors, the most common being osteogenic sarcoma.

DETECTION AND DIAGNOSIS

Clinical detection

Ninety percent of children with retinoblastoma are usually brought to the ophthalmologist because the patient's parents have detected one or more of the following signs or symptoms:

1. The most common finding is a white pupillary reflex called leukokoria ("cat's eye") which is present in 60% of patients.
2. Twenty percent of patients will present with strabismus, which is the second most common presenting sign or symptom.
3. The third most common presenting sign or symptom is a red, painful eye with glaucoma.
4. Five percent of children will present with poor vision.
5. Other signs or symptoms include orbital cellulitis, unilaterally dilated pupil, heterochromia, hyphema, nystagmus, or failure to thrive.

Diagnosis

Diagnosis is usually made on visual grounds alone. This is best done with the use of general anesthesia and dilated pupils.

Other studies include:

- Nonmetastatic workup
  - X-rays/CT scan. 75% of the patients with retinoblastoma have speckled, flecked calcification of the eyes on skull x-rays.
  - Ultrasonography shows presence of ocular and calcified masses.
  - Anterior chamber paracentesis. The aqueous humor is examined both cytologically and enzymatically. Cytologically, cases of retinoblastoma in which the tumor is in the anterior chamber will show individual tumor cells or tumor clumps. In contrast, in cases of inflammatory lesions from *T canis*, eosinophiles are present. Lactate dehydrogenase (LDH) and phosphoglucoisomerase (PGI) are elevated in the aqueous humor of the majority of retinoblastoma patients.
- Metastatic workup
  - Bone marrow aspiration or biopsy
  - Lumbar puncture
  - CBC, urinalysis, x-ray of skull, chest and long bones, EEG and brain scan

CLASSIFICATION

Retinoblastoma is most commonly classified according to the Reese-Ellsworth Classification:

- Group I:
  - A. Solitary tumor—less than 4 disc diameters (DD) in size at or behind the equator (1DD = 1.5 mm).
  - B. Multiple tumors—less than 4DD in size, all at or behind the equator.
- Group II:
  - A. Solitary tumor—4 to 10 DD in size, all at or behind the equator.
  - B. Multiple tumors—4 to 10 DD in size, all at or behind the equator.
- Group III:
  - A. Any lesion anterior to the equator.
  - B. Solitary tumors larger than 10 DD, behind the equator.
- Group IV:
  - A. Multiple tumors, some larger than 10 DD.
  - B. Any lesion extending anterior to the ora serrata.
- Group V:
  - A. Massive tumors involving more than half the retina.
  - B. Vitreous seeding.

PRINCIPLES OF TREATMENT

Treatment consists of the following:

- Enucleation
- External beam radiation
- Cryotherapy
- Localized radioactive plaque
- Systemic chemotherapy

These modalities may be subdivided into those affecting both the tumor and the normal retina (including enucleation, external beam radiation, and systemic chemotherapy) and those affecting the tumor alone (including cryotherapy, photocoagulation, and radioactive applicators).

Enucleation

The indications for enucleation include:

- Unilateral group V eyes
- Most bilateral group V eyes

Any blind eye with active tumor
Any eye with glaucoma from tumor invasion
Any eye that has failed all other forms of treatment
Some patients who cannot be followed in the future

External beam radiation
This treatment for retinoblastoma has been successfully used since 1903. Radiation therapy is tailored to the individual situation. All tumors treated with radiation will show regression, and in some it will be complete. As a result of low doses anteriorly, the incidence of radiation cataracts remains less than 5%.

Cryotherapy
This technique has been used for small retinoblastomas. The cryoprobe is applied directly to the sclera through the conjunctiva, and direct freezing is carried out, completely enclosing the tumor with an ice ball. This procedure is repeated in three freeze-thaw cycles.

Photocoagulation
Because the retinoblastoma derives its blood supply from the retina, xeron arc photocoagulation can be applied through the pupil under general anesthesia to obliterate the blood supply to the retina. It is a painless technique and has more than 80% success rate for single sittings.

Radioactive applicators
Many radioactive applicators have been employed for retinoblastoma. Because of the relative sensitivity of these tumors, beta sources have been used; but the largest experience has been in using gamma rays from cobalt-60.

Chemotherapy
Retinoblastoma is one of the first human tumors to be treated successfully with chemotherapy. The role of chemotherapy in treatment is still being evaluated.

Orbital extension in the absence of metastatic disease is treated by exenteration and irradiation, with or without chemotherapy. Mortality exceeds 95%, despite intensive treatment with chemotherapy and radiation in metastatic disease.

RESULTS AND PROGNOSIS
The overall survival rate for a patient with retinoblastoma is about 85%. Deaths are caused by intracranial spread or metastatic disease. A patient with group I or II disease has a greater than 90% likelihood of survival. In patients with group III disease, 70% can survive. Most series report few or no survivors among patients with group IV or group V disease. Many patients who are successfully treated for bilateral retinoblastoma later develop other cancers, not ocular, which have been called second nonocular tumors, the most common tumor being osteogenic sarcoma. Because of the development of these second nonocular tumors in the bilaterally affected patient, the survival of the bilateral patient is significantly worse than that of the unilaterally affected patient. Within five years after the diagnosis of retinoblastoma, more patients with retinoblastoma die from second, nonocular tumors than from the retinoblastoma itself.

Parents and patients should have genetic counseling. As more patients survive this tumor, the incidence of bilateral cases of retinoblastoma can be expected to increase.

Childhood non-Hodgkin's lymphoma (NHL)

INTRODUCTION
Lymphomas (Hodgkin's and non-Hodgkin's) are the third most common type of childhood cancer. NHLs include several unrelated lymphoreticular malignancies with confusing and changing terminology and histopathologic classifications. They are more closely related to childhood leukemias than to adult lymphomas. In the past they have tended to follow an aggressive course with poor response to treatment and poor survival. They often represent true emergencies at the time of diagnosis.

ETIOLOGY
The etiology of NHLs remains unknown. Certain groups have increased risk of NHLs: (1) patients with inherited or acquired immunodeficiency syndromes, (2) those with x-linked lymphoproliferative syndrome, (3) patients on immunosuppressive therapy or receiving transplants. However, the majority affected have no apparent immune defect. There is an association between African Burkitt's lymphoma and Epstein-Barr (EB) virus. There are consistent chromosomal abnormalities associated with certain lymphomas, including Burkitt's.

DETECTION AND DIAGNOSIS
NHLs can arise in any lymphoid tissue as well as in numerous extra-lymphatic sites such as bone and skin. Symptoms vary with the area involved and tend to progress rapidly over hours to days. Several patterns of presentation are common:
Rapidly progressive painless lymphadenopathy
Anterior mediastinal mass (30%-40%). This may present as an emergency with respiratory distress due to tracheal compression, pleural effusion, or superior vena cava obstruction.
Abdominal tumor (30%-40%). Symptoms are usually pain and vomiting, often with a right lower quadrant mass. Intussusception in a child over 6 years old should raise the suspicion of lymphoma. Tumor may be massive with rapidly increasing ascites. Bulky abdominal tumor is frequently associated with metabolic abnormalities—increased uric acid, potassium, and phosphates, and decreased calcium. Uric acid nephropathy and/or urethral obstruction can result in acute renal failure prior to or with the initiation of therapy.
Involvement of Waldeyer's ring, the nasopharynx, sinuses, and/or cervical nodes (10%-15%)

EVALUATION AND DIAGNOSIS
Initial evaluation depends on the site of the tumor and the degree of symptoms. Included should be a careful physical examination, CBC, platelet count, differential, chemistries to include uric acid, creatinine, LDH, electrolytes, calcium, po-

tassium, and chest x-ray. In some cases CT scans or ultrasonography are indicated, as in sinus tumors or retroperitoneal masses. A bone marrow aspiration may be diagnostic, especially in the presence of a mediastinal mass. Extensive evaluation should be avoided, since it contributes little beyond the physical examination and may delay treatment. Prompt suspicion of the diagnosis is important, since some children can be acutely ill from mass effects or metabolic disturbances. Patients should be stabilized if necessary and referred to a pediatric oncologist for definitive diagnosis.

Proper handling and fixation of biopsy material is critical. Planning and coordination prior to the biopsy are required to obtain immunologic studies, cytogenetic studies, and histologic diagnosis.

The least invasive site should be selected for biopsy. Airway obstruction may preclude safe intubation for general anesthesia. The patient with a mediastinal mass should have a bone marrow aspiration initially. Diagnosis may be made from cytology of pleural or ascitic fluid. Lymph nodes outside the mediastinum may be biopsied under local anesthesia.

CLASSIFICATION

Most childhood NHLs represent neoplastic transformation of T- or B-lymphocytes. Histologically, NHLs are divided into three major groups which correlate with immunologic subtype and clinical activity:

- The undifferentiated lymphomas (Burkitt and non-Burkitt) are mostly B-cell tumors and often arise in the abdomen.
- The lymphoblastic lymphomas (convoluted or not) are mainly T-cell tumors and tend to involve the anterior mediastinum.
- The large-cell lymphomas are heterogenous, mostly B-cell tumors, but some are of T-cell or histiocytic origin.

The immunologic type cannot always be predicted by histology.

Staging as with Hodgkin's disease is not appropriate with NHLs because of the potential for widespread dissemination even with localized disease. The rapid evolution and potential for life-threatening complications demand rapid assessment of the primary site and extent of tumor.

PRINCIPLES OF TREATMENT

A multidisciplinary team coordinated by an experienced pediatric oncologist can provide the best current management. Intensive care is often required at the time of diagnosis and initiation of therapy. Patients may develop airway or vascular compromise. Metabolic derangements can result in sudden death or acute renal failure before successful therapy can be initiated.

All children with NHLs should receive combination chemotherapy. The specific drugs, intensity, and duration of treatment depend on the stage and histologic and immunologic classification of the tumor. Clinical studies currently in progress are aimed at refining the therapy for each class of NHLs. The ten-drug combination most effective for the lymphoblastic lymphomas is not as effective for the undifferentiated lymphomas as a simpler regimen.

RESULTS AND PROGNOSIS

Improved survival in the past ten years has been based on the recognition of the systemic nature of NHLs and their potential for rapid dissemination from apparently localized sites. Systemic drugs in various combinations have resulted in overall survival of 50% to 80% of patients.

PART TWO: ISSUES IN PEDIATRIC CANCER CARE

An optimal care facility for childhood cancer

INTRODUCTION

The overall care of the child with cancer should be coordinated by a pediatric oncologist, who is defined as a pediatrician certified in pediatrics, with emphasis on pediatric oncology in his/her daily practice, trained and experienced in the current management of childhood cancer, and after 1975 eligible or certified by examination by the sub-board of pediatric hematology/oncology. He/she should be a member or active affiliate of a Pediatric Cooperative Study Group.

SERVICES AND FACILITIES

The following services or facilities should be available:

Diagnostic services

Imaging:
- Conventional radiography and fluoroscopy
- Computerized axial tomography
- Magnetic resonance imaging
- Radioisotope scanning
- Ability to perform arteriograms and venograms

Laboratory:
- A pathologist with training and demonstrated experience in the gross and histologic diagnosis of pediatric tumors
- Complete chemistry laboratory
- Ability to perform catecholamine studies
- Immunophenotyping facilities
- Ability and expertise in special staining techniques
- Access to electron microscopy
- Ability to perform bacterial, viral, and fungus cultures
- Blood bank that can provide packed red blood cells, platelet and white cell concentrates
- Access or facility to perform cytogenetic studies

Surgical services

- Surgeon(s) trained and experienced in the current surgical management of childhood tumors and with access to cooperative study group surgical guidelines
- Pediatric intensive care unit
- Anesthesiologist(s) with experience in administering anesthesia to sick children
- Ability to insert arterial lines, central venous access lines, and Ommaya reservoir

X-ray therapy services

- Therapy simulator
- Supervoltage x-ray therapy equipment

Radiotherapist with proven training and experience in current methods in delivering safe, effective x-ray therapy
Access to current comparative study XRT guidelines
Facilities in the x-ray therapy department to administer general anesthesia to small children when needed

Chemotherapy services
Under the direct supervision of a qualified pediatric oncologist
Pharmacy and oncology nurses who are thoroughly familiar with the safe handling and administration of chemotherapeutic agents to infants and children

Other services
Hyperalimentation (preferably under the direction of a nutritionist)
Psychologic/psychiatric/social services
Pediatric multidisciplinary case conference
Availability for out-of-town patients and families of cheerful, low-cost lodging
Participation in providing training experience in childhood cancer at various graduate and postgraduate levels, essential to maintaining an ongoing supply of professionals in the field of childhood cancer in the state

Cost as an issue in accessibility

INTRODUCTION
Cancer occurs less frequently in children than in adults. Children with cancer usually require referral to one of a limited number of pediatric cancer specialists in the state. The best care can be achieved by early referral, use of special diagnostic procedures, and early initiation of therapy, often according to standardized investigational protocols. Much of the continued therapy and monitoring may be provided by the primary care physician near the home for geographic and financial reasons. Adequate financial support is crucial to give children in all areas of the state access to adequate care.

COSTS
Medical costs include the costs of diagnostic procedures, inpatient and outpatient charges, physician fees, and therapy costs. Medical costs of childhood cancer vary widely by diagnosis and by prognosis. Charges are greatest in the diagnostic period and in the terminal stages of illness for those who die. Charges are greater for diagnosis requiring prolonged inpatient treatment, such as acute nonlymphocytic leukemia. Most patients require from one to three years of intensive chemotherapy. Chemotherapy may produce severe toxicity requiring treatment of the consequences of low white blood cell counts and low platelet counts. Patients require frequent monitoring of blood counts, regular physical assessment, and periodic radiographic studies. Therapy must be continuous and requires a long-term commitment to care.

Some patients may need special therapies such as bone marrow transplants. Bone marrow transplants have gained widespread use in leukemia patients who have become refractory to chemotherapy. They offer a chance for cure in an otherwise hopeless situation, but they carry a great cost because of prolonged hospitalization and supportive therapy.

Survivors of childhood cancer require long-term follow-up because of effects of therapy which may show up years later. These include endocrine disturbances, growth problems, neurologic dysfunction, and secondary malignancies. In addition to medical costs, the families must bear the burden of nonmedical costs related to the illness, costs which may require a substantial portion of the family budget. These out-of-pocket costs include transportation, food, lodging, and family care; wages lost; special diets; special equipment required for the child's care; and even funeral costs. These costs are influenced by the level of care required, the distance traveled for medical care, and the size of the family.

RESOURCES
At present there are financial resources for medical coverage of childhood cancer in Texas. These include Crippled Children's Services, Medicaid, private insurance, and the state-owned facility, the M. D. Anderson Hospital and Tumor Institute. The need for long-term continuous therapy raises concerns about the limitations of programs such as Crippled Children's Services, now facing severe budget cuts. Limits to the days allowed for in-patient therapy by Crippled Children's Services and Medicaid may be inadequate for patients with nonlymphocytic leukemia, some solid tumors, or bone marrow transplants.

Limited resources exist to assist families with nonmedical expenses they face. Charitable organizations such as the American Cancer Society and the Leukemia Society of America provide limited funds for transportation, drugs, and special supplies. Lodging is available in some cities in Ronald McDonald Houses or in areas provided by some medical centers. Some families rely on community fundraising and local appeals.

SUMMARY
Financial support is required to provide children in all areas of the state access to care. Therapy is of a continuous nature and requires a long-term commitment to care. Impending cuts in state and federal programs threaten the financial resources necessary to support adequate care for childhood cancer.

Psychosocial issues
The problem of maladjustment to cancer is the most insidious of the consequences of childhood cancer that must be addressed. Treatment must be executed at the lowest level of intervention needed. Many children and families have underlying pathology that is exacerbated under the stress of the cancer and its therapy. Accurate diagnosis is essential, and pathology-directed treatment indicated. It is of the utmost importance that such pathology is detected upon admission of the patient.

MALADJUSTMENT AS IATROGENIC DISEASE
Most children enter the care of the oncologist mentally healthy, just as they enter with normal and adequate nutrition. Many psychologic disorders are iatrogenic. The vast majority of such problems are the consequence of low expectations by

the parents, siblings, significant others, and the medical care team. Such low expectations can center on performance or on outcome. A low expectation of performance is a functional cause of the "acting out" of children. The diagnosis of cancer is no different from that of diabetes, hemophilia, or any one of a wide variety of disorders. However, physical limitations often must be put on the child with cancer. An amputee has difficulties that a child with intact limbs does not face. Similarly, since chemotherapy can induce susceptibility to infections, a consequent restriction in environmental exposure is necessary. However, these physical limitations are not a basis for restricting a child's development by narrowing the expectations. The issues of self-image and disfigurement that are faced by children with cancer can be mastered, as well, if the child is given the opportunity.

So often the diagnosis of cancer in a child has significant consequences for the family. Marital discord increases significantly after the diagnosis of cancer is made. Unless these problems are acknowledged and addressed, the child will not have an environment within which healthy adaptation can take place. A phrase was coined: "The mind of a child who is said to be sick." Being described as sick has many consequences; such consequences can be anticipated and dealt with. We know little of the specifics of these ramifications; however, data are beginning to emerge. In addition, there is a perceived threat to being, inherent in the cancer. That fear must be acknowledged and accepted by the child. Having had cancer must be a reality incorporated into being. Therapy is centered, at the first opportunity, on communication—not just the question of whether to tell or not to tell the diagnosis, but more importantly on opportunities for honest and supportive discourses on diagnosis, treatment, prognosis, and concerns about dying and death. Opportunities must be provided to examine fantasies, fears, and expectations in such a way that distortions can be corrected and so that support is available. This can be accomplished through group sessions and individual support encounters. Younger children need the support of play therapists.

INFORMATION NEEDS

A major need is that of accurate information. The ultimate outcome of the child is positively correlated with early knowledge of the diagnosis. On the other hand, much fear and anxiety is fueled by inadequate or inaccurate information.

The mode by which information ought to be transferred to parents and patients can vary greatly from the preconceived ideas of the staff. Careful physician-physician communication must be maintained. The primary referring physician may be looked upon by the patient and family as the primary source of information. More importantly, information must be consistent to be therapeutic in a rehabilitative sense. It is destructive when conflicting information is given. Even within the tertiary referral institution, much attention must be given to uniformity of information. This does not mean that certainty must always be conveyed; in fact, certainty may not be reality, and all health care professionals must be at ease with the fact of uncertainty.

SOCIAL FUNCTION

The most important aspect of long-range outcome is appropriate social function. Since children are in the process of learning future social function, addressing the immediate problems generated from cancer must be an ongoing process to allow a well-adjusted, cured child. The arenas of social adjustment of special concern are home, school, and, at a later date, marital relationships. The child's place in society is determined largely by the home and those social contacts sanctioned by the home: church, organized group activities, and neighborhood of residence. School is to a degree beyond the home control and is the most important arena of socialization. The individual's later job performance is determined by past schooling and is primarily determined by acquired skills and individual self-esteem. Marital success depends on a one-on-one mutual interaction that is uniquely intense, and one that, therefore, often becomes a focal point of crises.

An underlying problem in the social rehabilitation of the child with cancer is the unwillingness of society to consider having had cancer as acceptable. Society commits much *a priori* ostracization in job discrimination, insurance limitations, and restrictions on military service. Ideally, such attitudes will change, but they cannot be forced into change. However, as more and more children survive, society's attitudes will change with time. One cannot create an illusory concept around cancer in the child and ignore the children who survive. The real problem, however, remains the child's self-image. To make a child functional in society, changing the world is not the best solution. The children must accept themselves as they are. The immediate image-shaping facets of the child's environment are family, school, and later, a life partner who must also accept the individual the way he or she is. This is the target of social rehabilitation, and there are general approaches that allow self-esteem to grow by providing positive experiences. Regular parties are one part of such an effort, as are camps for children with cancer. Even ski trips for amputees have been organized, but the major emphasis must come from home and school.

THE CONCEPT OF NORMAL

The idea of normal is an elusive one. Normal is an ontologic concept, an idea of being. Cancer as an experience is not abnormal. The phrase "the normally sick child" is very appropriate here.

To a large degree, the therapeutic community within which the care of the child with cancer is executed sets the model for family behavior and has a similar impact. Therefore, great attention must be given to the functioning of the therapeutic environment. This was discussed elsewhere in some detail and deserves repeating here. A sick child is cared for in a therapeutic community composed of many participants. All have equal responsibility for the welfare of the child but different tasks to perform to safeguard that welfare. All see the child from different angles. The normalcy that one hopes to recognize and maintain has very different meanings for each. Physicians are burdened with achieving physical cure. They must be resilient in the face of failure and unexpected late effects. Nurses must carry out many unpleasant procedures; they are also the caregivers in most frequent contact with the child. Social workers

often must solve problems for the family in a businesslike way, while keeping in mind the emotional needs that can be met by easing physical and economic burdens. Responsible mental health professionals—social psychotherapists, play therapists, and psychologists—see the gradual dawning of awareness in children who are forced to grow up in a world that is so clearly not what was wished for them.

School teachers must educate the child within the reality of the disease. Volunteers, technologists, and chaplains are asked to view the child as normal without being made aware of what that child's reality is by physicians and primary mental health professionals.

THE THERAPEUTIC COMMUNITY

We must not forget that part of the child's reality is the care community. Much acting out, much apparent pathologic behavior in children, is a reaction to a disturbed family. Such a child may be acting the only way the family will let him, and may be normal in that reality. Children learn how to behave from those around them, either family members or members of the therapeutic community. Many families see only the child's disturbed behavior, which actually reflects the pathology in the family. Such children may be completely normal, but their environment requires abnormal adjustments.

There is, however, one fundamental difference between the family and the therapeutic community. With very few exceptions, a child is born into a family and knows no other. Children enter the therapeutic community late. Most are mentally healthy, intellectually average, and able to cope with usual demands. It is true that mental illness in our society has appalling dimensions, but the fact remains that more than 90% of all children are basically able to cope with stress. Therefore, when many children are judged abnormal by the community, there is likely a basic flaw in the community itself. Even in a family in which all children experience mental deviation, an overt family disturbance is likely to be the cause (except for rare genetic disorders).

Healthy children are normal as long as the family allows them to be. They will grow, develop, and become independent and finally self-supportive if positive development is tolerated and at least occasionally encouraged. The normally sick child is no different. Optimal behavior requires an optimal environment.

SCHOOLING FOR THE CHILD WITH CANCER

The task of the child is going to school. Social outcome is dependent on adequate school performance. Data indicate that there is much potential for malfunction in school for children with cancer.

Learning in adversity is possible. Teachers must be provided appropriate information so that they can cope without fear with the child who has cancer. A special issue of the *Journal of School Health* was devoted to childhood cancer (10). However, information becomes outdated so rapidly that information dissemination must be an ongoing process.

A difficult dialectic develops: On the one hand, cancer is a true handicap to the child, the more insidious because it is a hidden handicap; but, on the other hand, ignoring the reality of cancer in the school setting is not necessarily useful either. That cancer is a true handicap is officially accepted. Therefore, all the questions that are raised in education through the enactment of The Education for All Handicapped Children Act, Public Law 94–142, which mandates that "all children are entitled to an education in the least restrictive environment," are germane to the child with cancer. The enactment of this law resulted in an entirely new relationship between the child consumer and the school district. To partake of such benefits, the child has to be stigmatized as handicapped. The child is consequently forced to wear the label of "cancer" in the school, and this may be a serious problem. Yet, to ignore the effects that cancer and its treatment can have on a child's social life does that child a disservice as well. Schooling must be ongoing during therapy lest the child acquire an unremediable deficit. This goal is readily achievable. If the child is functionally capable of normal education, "mainstreaming" should be automatic and not through the cumbersome process of Public Law 94–142: The ARD (Admission Review and Dismissal) conference and the IEP (Individualized Education Plan). Close liaison with school must be maintained to avoid extremes: neither should a child enter school with cancer as a secret nor should cancer become a handicapping label (11).

School is a primary arena for the socialization of a child. As thoughts and ideas in society change, schools are used to teach these new beliefs. Because teachers must constantly adjust to new realities, they must remain continually informed. Again, cancer is no different from any other chronic illness. It is a disease that involves both body and mind, and the school must accommodate that reality.

REFERENCES

The role of the family physician

1. Silverberg E: Cancer statistics. CA 35:19–35, 1985.
2. Fernbach DJ: Natural history of acute leukemia, in Sutow WW, Fernbach DJ, Vietti TJ (eds): Clinical Pediatric Oncology. St Louis, C V Mosby, 1984, pp 332–377.
3. Knight PJ, Mulne AF, Vassy LE: When is lymph node biopsy indicated in children with enlarged peripheral nodes? Pediatrics 69:391–396, 1982.
4. Lake AM, Oski FA: Peripheral lymphadenopathy in childhood. Am J Dis Child 132:357–359, 1978.
5. Meadows AT, Kramer S, Hopson R, et al: Survival in childhood acute lymphocytic leukemia: Effect of protocol and place of treatment. Cancer Invest 1:49–55, 1983.
6. Lennox EL, Stiller CA, Jones M, et al: Nephroblastoma: treatment during 1970–1973 and the effect on survival of inclusion in the first MRC trial. Br Med J 2:567–569, 1979.
7. Bloom BS, Knorr RS, Evans AE: The epidemiology of disease expenses: The costs of caring for children with cancer. JAMA 253:2393–2397, 1985.

Neuroblastoma

8. Manual for Staging of Cancer. Chicago, American Joint Committee for Cancer Staging and End-Results Reporting. 1978, p 165.
9. Evans AE, et al: A proposed staging for children with neuroblastoma. Cancer 27:374, 1971.

Psychosocial issues
10. Special issue on childhood cancer. J Sch Health 27(2), 1977.
11. Deasy-Spinetta P, Tarr D: Public law 94–142 and the student with cancer: An overview of the legal, organizational, and practical aspects. J Psychosocial Oncology 3(2):97–105, 1985.

ADDITIONAL SUGGESTED READING

Pediatric brain tumors
Cohen ME, Duffner PK: Brain Tumors in Children: Principles of Diagnosis and Treatment. New York, Raven Press, 1984.

Neuroblastoma
Pochedly C (ed): Neuroblastoma Clinical and Biological Manifestations. New York, Elsevier, 1982.

Childhood leukemia
Baehner RL, Miller DR: Hematologic malignancies: leukemia and lymphoma, in Miller D, Pearson HA, Baehner R, McMillan CW (eds): Blood Diseases of Infancy and Childhood, ed 5. St Louis, C V Mosby Inc, 1984, pp 619–676.
Bowman WP: Advances in the management of childhood leukemia. Tex Med 81(4):39–44, 1985.
Simone JV, Rivera G: Management of acute leukemia, in Sutow WW, Fernbach DJ, Vietti TJ (eds): Clinical Pediatric Oncology, ed 3. St Louis, C V Mosby Inc, 1984, pp 378–402.

Childhood osteosarcoma
Jaffe N (ed): Bone Tumors in Children. Littleton, Mass, PSG Publishing Co, Inc, 1979.
National Institutes of Health: NIH consensus development conference on limb-sparing treatment of adult soft tissue sarcomas and osteosarcomas. Cancer Treatment Symposia 3:1–5, 1985.

Ewing's sarcoma
Nesbit E Jr, Robison LL, Deliner LP: Round cell sarcoma of bone, in Sutow WW, Fernbach DJ, Vietti TJ (eds): Clinical Pediatric Oncology, ed 3. St Louis, C V Mosby, 1984, pp 710–733.

Retinoblastoma
Blodi FC: Retinoblastoma. New York, Churchill Livingstone, 1985.
Konrad PN, Ertl JE: Pediatric Oncology. Medical Outline Series, Garden City, New York, Medical Examination Publishing Co, Inc, 1978.

Childhood non-Hodgkin's lymphoma
Buchanan GR: Childhood non-Hodgkin's lymphoma. Tex Med 81(3):46–49, 1985.
Link MP: Non-Hodgkin's lymphoma in children. Pediatr Clin North Am 32:699–720, 1985.

Cost as an issue in accessibility
Bloom BS, Knorr RS, Evans AE: The epidemiology of disease expenses: The costs of caring for children with cancer. JAMA 253:2393–2397, 1985.
Lansky SB, Black JL, Cairns NU: Childhood cancer, medical costs. Cancer 52:762–766, 1983.
Lansky SB, et al: Childhood cancer, nonmedical costs of the illness. Cancer 43:403–408, 1979.

Psychosocial issues
Van Eys J: The concept of rehabilitation in pediatric oncology, in Gunn AE (ed): Cancer Rehabilitation. New York, Raven Press, 1984, pp 195–218.

Colorectal cancer

Colorectal Oncology Workgroup
Wayne H. Schwesinger, MD, Chairman
H. Randolph Bailey, MD; Peter C. Canizaro, MD; Frank L. Lanza, MD; Joseph Dean McCracken, MD; J. Patrick O'Leary, MD; Edwin D. Savlov, MD; Noel Bonham Searle, MD; John Robert Stroehlein, MD; Ralph Frederick Wells, MD; Resource Consultant, Tyvin A. Rich, MD

Contents

46 INTRODUCTION
46 EPIDEMIOLOGY AND ETIOLOGY
46 SCREENING
47 DIAGNOSIS
48 CLASSIFICATION AND STAGING
50 PRINCIPLES OF TREATMENT
51 CLINICAL RESULTS
51 FOLLOW-UP EXAMINATION

INTRODUCTION

These guidelines support the goal of earlier diagnosis of colorectal cancer, which is expected to affect more than 130,000 people for the first time each year in the United States. Since over 90% of all cases occur in persons age 50 or older, the goal of earlier diagnosis becomes even more important when one considers that this segment of the population is increasing.

There is also a need to identify high-risk subgroups in whom cancer characteristically develops at an earlier age. A much clearer picture exists today concerning which persons are at increased risk for colorectal cancer. This information needs to be disseminated to patients and physicians throughout the state.

Perhaps most important is the fact that colorectal cancer can be diagnosed before symptoms develop. When still asymptomatic, the disease is usually in an early stage. Surveillance measures, although imperfect, can enhance the likelihood of identifying disease before symptoms develop.

Prevention is key to any cancer control plan. The factor or factors primarily responsible for the development of and hence primary prevention of large bowel cancer have yet to be established. However, secondary prevention can be accomplished by earlier detection and eradication of premalignant conditions. Specific examples of secondary prevention include prophylactic colectomy for unusually high-risk conditions such as familial polyposis coli and removal of polyps through a flexible fiberoptic instrument called a colonoscope.

Currently, the mortality from colorectal cancer approaches 50%. This need not be. Early diagnosis, secondary prevention, and effective surgical intervention can help reduce this mortality. These benefits can result from improved understanding of this disease, recognition of high-risk groups, optimal application of newer methods of fecal occult blood testing, and use of technological advances including endoscopic polypectomy, improved, standardized barium enema examination, and development of other imaging studies.

Surgical techniques and alternatives have improved along with other advances. The changing spatial distribution of colorectal cancer, combined with newer surgical techniques, allow for preservation of anal sphincter mechanisms and normal rectal evacuation of stool. Patterns of recurrence have been established, and therapeutic efforts have been developed using radiation and/or chemotherapy or immunotherapy to reduce the possibility of recurrence.

The problem is well-defined. Colorectal cancer results in major personal and economic impact for Texans and other citizens of the United States. The practical potential exists for making an impact on the morbidity, mortality, and economic consequences of the disease. What is needed to meet this potential is application of our current knowledge and identification of areas for additional research. It is hoped that the following guidelines will provide direction for achieving this goal. They are not presented as a detailed map but as a compass that should help guide Texas physicians and others who provide health care to patients.

EPIDEMIOLOGY AND ETIOLOGY

Risk factors major and minor

Certain individuals have a significantly higher risk of developing colorectal carcinoma and should be screened at regular intervals for this disease:

- History of ulcerative colitis
- Presence of any genetic polyposis syndrome
- Individuals with previous colon cancers
- History of previous colorectal polyps
- Family history (updated every two to three years) of colorectal cancer
- Individual history of breast or female genital cancer
- Previous history of radiation therapy to the pelvis

Pathogenesis and prevention

There is a growing body of evidence that diets high in fat content, high in processed meats and low in fiber are associated with a higher incidence of colorectal cancer. Dietary education could have a major impact on lowering the incidence of this common malignancy.

Recommended dietary modifications include the following:

- A diet low in animal fats, low in processed meats (bacon, luncheon meats, hot dogs, sausages, etc)
- A diet high in fiber foods (whole wheat or other whole grain breads, bran products)
- A diet containing cruciferous vegetables (broccoli, cauliflower, cabbage, brussels sprouts)
- Citrus fruits, apples, and pears as a natural source of vitamins, particularly vitamin C

SCREENING

The growth and spread of colon cancers are relatively slow, and cancer of the colon occurs mostly after age 40. Because removal of the precursor lesions can prevent the development of cancer, the goals of colon cancer screening in asymptomatic

patients are:
Identification of high-risk groups
Detection and removal of precursor lesions to prevent development of colon carcinoma
Detection of colon cancers before symptoms occur

Target groups
In general, the target groups of screening include:

HIGH-RISK GROUPS
Age—over age 40
Associated diseases—ulcerative colitis and Crohn's disease of the colon

HISTORY
Previous adenomas or carcinomas of the colon
Breast or female genital tract carcinomas
Previous irradiation therapy to the pelvis

HEREDITY
Family history of colorectal carcinoma
Familial polyposis syndromes

Methods
Mass screening for occult colorectal carcinoma, polyps, and precursor lesions requires patient awareness and compliance, physician education and time, and a thoughtful evaluation of costs.

STOOL OCCULT BLOOD TEST
The stool occult blood test is the least costly but probably least accurate as a means of screening for colorectal carcinoma. Of patients screened, 2% to 8% will demonstrate a positive test. Of these, 20% to 30% will have colonic polyps, and 2% to 6% will have cancer. Many other causes of upper and lower gastrointestinal bleeding may cause positive reactions. This test is recommended for everyone over 40 years of age.

DIGITAL RECTAL EXAMINATION
A digital rectal examination should be performed annually on healthy individuals under age 40 in the high-risk group, and annually on individuals over 40.

PROCTOSIGMOIDOSCOPY
Proctosigmoidoscopy is recommended starting at age 50. If two annual examinations are negative, further examinations may be spaced at three- to five-year intervals. Flexible sigmoidoscopy 35 to 60 cm may increase case finding by increasing the range of the sigmoidoscope. Using rigid sigmoidoscopy, 11.5% of patients were found to have one or more polyps at the first examination. This figure is increased to 19.2% if more than one examination is carried out on the same population.

DOUBLE CONTRAST BARIUM ENEMA AND COLONOSCOPY
These procedures are not recommended as screening tests in the general population. However, as soon as major risk factors are identified, these tests should be considered because of their heightened accuracy.
In ulcerative colitis and Crohn's colitis, sequential biopsies may allow early detection of premalignant dysplastic changes.
A patient with a family history of polyposis should be carefully screened for evidence of adenomata and early colectomy recommended when adenomata are found.
Colonic polyps, if adenomatous, even after polypectomy place a patient in a high-risk category for further polyps. Lifelong surveillance should be initiated.

DIAGNOSIS
Patients who are symptomatic because of colorectal carcinoma generally have more advanced disease and carry a more guarded prognosis.

Symptoms
Symptoms are frequently non-specific and may be hard to distinguish from more chronic problems such as irritable bowel syndrome, diverticular disease of the colon, or inflammatory bowel disease. Some generalizations about tumor location and symptoms may be made. Right colon lesions may produce anemia, weight loss, and abdominal pain, and may even present as a palpable mass detected by the patient. Lesions of the left colon may produce change in bowel habits, ranging from obstipation to passage of blood or mucus in the stool, while rectal lesions may produce tenesmus, a sense of incomplete evacuation, and rectal bleeding. Unfortunately, some patients may not present until they have experienced a complication such as intestinal obstruction, perforation, or involvement of a contiguous organ such as the vagina or bladder. Massive rectal bleeding may be the presenting finding of neoplasia, but it is more often due to diverticular disease.

Physical examination
The physical examination in the asymptomatic patient may be totally unremarkable, although an early rectal carcinoma may be palpated on rectal examination. Patients with more advanced disease may exhibit weight loss, obvious findings of anemia, abdominal pain, abdominal or pelvic mass, hepatomegaly, ascites, or lymphadenopathy. In all patients, a careful general examination is in order to detect local extension or metastatic disease.

Diagnostic procedures

LABORATORY
The laboratory offers little in the way of specific diagnostic modalities, although the CBC, chemistry profile, and urinalysis provide some indirect information which provides data for subsequent monitoring.

PROCTOSIGMOIDOSCOPY
Proctosigmoidoscopy has long been accepted as a key diagnostic tool. Rigid proctosigmoidoscopy has now been supplanted by flexible sigmoidoscopy, using either a 35- or a 60-cm instrument. The 35-cm instrument offers superior depth

of introduction over the rigid proctoscope, and its use can be readily mastered by the primary physician. The 60-cm flexible sigmoidoscope offers some advantage, in that more colon neoplasms are being found proximally; but a higher degree of endoscopic training is a prerequisite for its safe use. Biopsy and cytology should be done if any suspicious lesions are encountered at sigmoidoscopy.

BARIUM ENEMA

A barium enema, either a carefully done single-column or, optimally, a double-contrast study, complements sigmoidoscopy. Conventional abdominal films are of little help in early lesions but may prove diagnostic in patients presenting with complications such as perforations or intestinal obstruction. The intravenous pyelogram (IVP) is useful preoperatively in demonstrating the route of the ureters and providing information about possible bladder involvement.

COLONOSCOPY

Since 1969, colonoscopy has been available in this country and presently represents a singularly effective diagnostic and therapeutic tool. Major advantages are the detection of small lesions which may not have been detectable by x-ray, plus the capacity for biopsy, both lavage and brush cytology, as well as polypectomy.

Optimally, colonoscopy should be performed in all patients once a diagnosis of colorectal carcinoma is established, in order to exclude any synchronous lesions such as an adenoma or a second carcinoma. Colonoscopy and polypectomy may be used to remove adenomas which have a malignant potential and may prove a definitive therapeutic measure in patients experiencing early carcinomatous change.

CARCINOEMBRYONIC ANTIGEN (CEA)

The carcinoembryonic antigen (CEA) has no role as a screening test but provides a useful tool for monitoring recurrences.

CT SCAN

CT scan of the abdomen may provide some help in determining tumor extent prior to initial surgery, especially in patients with rectal lesions. It may also aid in the evaluation of liver metastases.

ANGIOGRAPHY

Angiography may be important primarily in assessing the hepatic and visceral vasculature in patients with advanced disease who are being considered for local administration of chemotherapy or possible hepatic resection.

OTHER PROCEDURES

Discussion of newer investigational screening and diagnostic procedures such as immunochemical tests, Hemo Quant test, tissue markers such as ornithine decarboxylase, or circulating marker such as deficient DNA repair in circulating lymphocytes, and monoclonal antibodies, is beyond the scope of this report. These procedures do provide a clue as to clinical and basic research interests in colorectal cancer.

CLASSIFICATION AND STAGING

Introduction

In retrospective studies, meaningful clinical correlates are difficult to arrive at, because of inadequacies in clinical data collection and transcription. Several different systems have been proposed to classify the extent of such tumors, with some classifications being more extensive than others. For the purposes of this report, the TNM classification will be detailed in depth, then compared to the AJCC (1982), Dukes, and Astler-Coller classifications in schematic form (Fig 1).

ANATOMY

For simplicity, the large intestine, which extends from the terminal ileum to the anal canal, will be divided into intraabdominal colon and rectum.

1. Carcinoma of the colorectum. Stage classification and stage grouping (AJCC, Dukes, Astler-Coller).

AJCC (1982)	Dukes (1932, 1935)*	Astler-Coller†
Stage 0		
Carcinoma in situ		Stage 0
Tis, N0, M0		0
Stage I		
IA Tumor confined to mucosa or submucosa	A	A
T1, N0, M0		
IB Tumor involves muscularis propria but not beyond	A	B1
T2, N0, M0		
Stage II		
Involvement of all layers of bowel wall with or without invasion of immediately adjacent structures	B	B2
T3, N0, M0		
Stage III		
Any degree of bowel wall involvement with regional node mestastasis	C (1932) C1 (1935) C2 (1935)	C1 C2
Any T, N1-N3, M0		
Extends beyond contiguous tissue or immediately adjacent organs with no regional lymph node metastasis		
T4, N0, M0		
Stage IV		
Any invasion of bowel wall with or without regional lymph node metastasis but with evidence of distant metastasis	Type 4 (so-called D)	D
Any T, any N, M1		

*Dukes: A = Limited to bowel wall; B = Spread to extramural tissue; C = Involvement of regional nodes (C1: Near primary lesion; C2: proximal node involved at point of ligation); Type 4 (so-called D) = Distant metastasis.
† Astler-Coller: A = Limited to mucosa; B1 = Same as AJCC Stage IB (T2a); B2 = Same as AJCC Stage IB (T2b); C1 = Limited to wall with involved nodes; C2 = Through all layers of wall with involved nodes.

TNM classification

The important determinants of survival in the TNM classification are the depth of tumor penetration, involvement of regional lymph nodes, and the presence of distant metastases. Other anatomical factors associated with survival are local tumor invasion (venous or lymphatic) and the grade of tumor.

The definitions of TNM categories for carcinoma of the colon and rectum follow. Each case must be assigned the highest category of T, N, and M that describes the full extent of disease in that case.

PRIMARY TUMOR (T)

TX Minimum requirements to assess the primary tumor cannot be met.
T0 No evidence of primary tumor.
Tis Carcinoma in situ (no invasion of lamina propria).
T1 Tumor confined to the mucosa or submucosa (eg, carcinoma de novo, carcinomatous adenoma, either polypoid or papillary/villous).
T2 Tumor limited to wall of colon or rectum but not beyond—for example, invasion into muscularis propria or subserosa (colon and proximal rectum) and into muscularis propria but not beyond (distal rectum).
T2a Tumor extending into muscularis propria but not penetrating through it.
T2b Tumor extending through the wall with complete penetration of the muscularis propria.
T3 Tumor invades all layers of bowel wall including serosa (colorectal) without extension to adjacent or contiguous tissues. Fistula may or may not be present.
T4 Tumor has spread by direct extension beyond contiguous tissue or the immediately adjacent organs.
T Multiple primary carcinoma. The greatest extent of the tumor is indicated as usual by a suffix as described above, and the number of multiple tumors is indicated by a parenthetic numerical prefix.

REGIONAL NODAL INVOLVEMENT (N)

NX Minimum requirements to assess the regional nodes cannot be met.
N0 Nodes not involved.
N1 One to three involved regional nodes adjacent to primary lesion.
N2 Regional nodes involved extending to line of resection or ligature of blood vessels.
N3 Nodes contain metastasis, location not identified. Specify number examined; number involved. (Case cannot be properly staged.)

DISTANT METASTASIS (M)

MX Minimum requirements to assess the presence of distant metastasis cannot be met.
M0 No (known) distant metastasis.
M1 Distant metastasis present (including extra-abdominal nodes; intra-abdominal nodes proximal to mesocolon and inferior mesenteric artery [juxtaregional]; peritoneal implants, liver, lungs, and bones).

Specify _____

Specify sites according to the following notations:

Pulmonary	PUL	Bone marrow	MAR
Osseous	OSS	Pleura	PLE
Hepatic	HEP	Skin	SKI
Brain	BRA	Eye	EYE
Lymph nodes	LYM	Other	OTH

Add + to the abbreviated notation to indicate that the pathology (p) is proven.

POSTSURGICAL RESECTION RESIDUAL TUMOR (R)

R0 No residual tumor.
R1 Microscopic residual tumor.
R2 Macroscopic residual tumor.
Specify _____

Stage grouping

STAGE 0
Tis, N0, M0
Carcinoma in situ

STAGE I
Stage IA: T1, N0, M0
Tumor confined to mucosa or submucosa
Stage IB: T2, N0, M0
Tumor involves muscularis propria but not beyond.

STAGE II
T3, N0, M0
Tumor involves all layers of bowel wall with or without invasion of immediately adjacent structures.

STAGE III
Any T, N1–3, M0
Any degree of bowel wall invasion with regional node metastasis.
T4, N0, M0
Tumor extends beyond the contiguous tissue or immediately adjacent organs with no regional node metastasis.

STAGE IV
Any T, any N, M1
Any degree of invasion of bowel wall with or without metastasis to regional lymph nodes but with evidence of distant metastasis.

Histopathology

Tumor grading is recommended with reference to the WHO nomenclature. Although attempts to correlate this with survival have been made, precise predictive coefficients have not been established to date.

TUMOR GRADE (G)

GX Grade or differentiation not determined, not stated, or not applicable
G1 Well differentiated
G2 Moderately well differentiated
G3 Poorly differentiated
G4 Undifferentiated

PRINCIPLES OF TREATMENT

Treatment overview

At present, the state of the art in treatment of colorectal carcinoma involves surgical resection of the primary tumor and regional lymph nodes for localized disease.

Specific treatment modalities

SURGICAL

General principles of surgical therapy for primary colorectal carcinoma include:

- Resection of the primary tumor with adequate margin of normal bowel proximal and distal to the tumor.
- Removal of the regional lymphatic-bearing area and vascular pedicle. Studies indicate that wide excision of the lymphovascular pedicle significantly increases survival when compared to limited wedge resections.
- En bloc resection of adjacent organs, when they appear to be involved by the primary tumor.
- Resection of solitary area of distant metastasis (ie, liver or lung) if the primary tumor appears to be controlled surgically.
- Restoration of intestinal continuity whenever it can be performed without compromise of the above principles.

RADIATION THERAPY

The primary role of radiation therapy is in the adjuvant therapy of carcinoma of the extraperitoneal rectum in reducing frequency of local recurrence. It has been used both pre- and postoperatively with apparent benefit. Preoperative radiotherapy may convert a bulky neoplasm into a resectable lesion. Radiation is of less value in the intraperitoneal colon because dosage is greatly limited by the exposure of the adjacent small bowel and other organs.

CHEMOTHERAPY

Numerous studies of currently standard anti-cancer drugs as an adjunct to surgery have not shown significant survival benefit. Patients who are at significant risk for recurrence should be considered for entry into investigational protocols, studying the usefulness of chemotherapy or biological therapy or, in some cases, radiation therapy as an adjunct to surgical resection. Clinicians treating colorectal carcinoma should be aware of the availability of investigational protocols in their regional cancer centers and refer appropriate patients early after treatment of the primary tumor.

IMMUNOTHERAPY

While appealing in theory, adjuvant immunotherapy has, to date, shown no significant survival benefit over surgery alone.

Special considerations of treatment

CARCINOMA OF THE RECTUM

Multiple studies have shown that when the distal margin of resection is adequate, abdominoperineal resection and colostomy give no survival or local recurrence benefit over low anterior anastomosis. New anastomotic techniques have made lower anastomoses more technically feasible.

Recent evidence suggests that highly selected carcinomas of the distal rectum may be managed by those experienced in evaluation and treatment by (1) local excision with or without postoperative radiotherapy, and (2) contact radiotherapy (Papillon technique).

CARCINOMA OF THE COLORECTUM WITH CHRONIC ULCERATIVE COLITIS

When carcinoma of the colorectum is found in conjunction with chronic ulcerative colitis, this is an indication for resection of the entire colorectum in order to remove other synchronous lesions and avoid the development of metachronous neoplasms (see specialized centers below).

COLORECTAL CARCINOMA WITH FAMILIAL POLYPOSIS

Finding colorectal carcinoma in conjunction with familial polyposis (and variants of this syndrome) is also an indication for resection of the entire colon and, in many cases, the rectum or rectal mucosa to remove synchronous lesions and avoid the development of metachronous neoplasms. In specialized centers, operative procedures to remove the entire rectal mucosa and reestablish bowel continuity are being performed in selected patients with both ulcerative colitis and polyposis syndromes.

METASTATIC DISEASE

In patients with widespread metastatic disease, individualization of therapy is needed, bearing in mind certain principles:

- Impending or complete bowel obstruction should be relieved by resection and anastomosis, or either bypass or ostomy whenever resection is not practical.
- Perforation should be treated by resection and ostomy whenever feasible.
- Laser therapy may have a role in the therapy of advanced carcinomas of the rectum to relieve obstruction or debulk the tumor.
- Rarely does a "palliative" abdominoperineal resection benefit the patient in the face of widespread metastatic disease.

OOPHORECTOMY

Some authors have recommended prophylactic oophorectomy as part of the primary treatment of colorectal cancer. Data is insufficient for this treatment to be strongly recommended.

Management of recurrent and advanced disease

SURGERY

As with primary disease, only surgical resection has shown long-term survival benefit in recurrent colorectal carcinoma. Most "suture line recurrences" represent extrinsic disease growing into the bowel. Such extrinsic disease should be looked for and resected whenever feasible.

RADIATION THERAPY

Radiation therapy may be of benefit in shrinking recurrences

to make them surgically resectable.
It may also provide pain relief (especially in the rectum and anus).
Intraoperative radiotherapy may be of value in the management of bulky recurrence or nonresectable primary lesions.
Implantation of recurrent or nonresectable tumors with radioactive gold or iridium has been shown to be of palliative benefit.

CHEMOTHERAPY
Chemotherapy, either systemic or regional (for example, intrahepatic or pelvic perfusion) may produce objective remissions in 10% to 50% of patients so treated. Again, entry of patients into investigational chemotherapy protocols is needed in order to evaluate new and potentially beneficial agents or combinations of therapy.

CLINICAL RESULTS

Except for improvements in perioperative mortality, the outcome of treatment for colorectal carcinoma has changed little in the past several decades. Overall, more than half of all patients with proven carcinoma of the large bowel die of their disease.

Long-term results related to tumor stage

Long-term results of therapy are related to clinicopathologic tumor stage:

TNM Class	Dukes Stage	Average 5-Year Survival
T1, N0, M0	A	95%
T2, N0, M0	B	60%
T1+, N1+, M0	C	35%
T1+, N1+, M1	D	5%

Other adverse factors

Other factors that may adversely influence survival, independent of stage are: male gender, initial symptom of obstruction, tumor located in rectum, poor histologic grade or mucin production, and venous invasion.

Patients with advanced disease

Not all patients with colorectal carcinoma are candidates for radical surgery at the time of their initial diagnosis. Nearly one third will have a far advanced tumor which precludes definitive therapy. However, many of these incurable patients can benefit from a more limited palliative procedure to avoid bleeding, pain, perforation, or local extension. With liver metastases, the average survival is less than one year.

Patterns of failure after surgery

When definitive surgical treatment is used and fails, patterns of failure are variable. The distribution of recurrence may be single or multifocal, since multiple mechanisms of spread are known. These include direct extension, vascular embolization, and lymphatic involvement.

Liver metastases are a common cause of treatment failure. They occur as some component of failure in over 50% of the failure group.

Local recurrence is another common component of failure, especially in tumors of the rectum. There is a strong correlation between tumor penetration through the full thickness of the bowel wall and local recurrence.

Peritoneal seeding and extra-abdominal metastases to the lung, bone, or brain are less commonly seen.

Survival after recurrence

The majority of recurrences (70%-75%) are noted within three years of presumed curative surgery. Once detected, mean survival is generally less than 10 months. Approximately 20% of the patients with solitary liver or lung metastases which are resected will live five years.

Radiotherapy and chemotherapy

Neither radiotherapy nor chemotherapy has been demonstrated to have a significant effect on survival.

FOLLOW-UP EXAMINATION

The evaluation of patients who have undergone treatment for adenocarcinoma of the colon is important to detect second primary (metachronous) carcinomas, recurrence of the original neoplasm, and to diagnose premalignant adenomas. The risk of developing a second primary cancer has been estimated to be about 3.5%. If the patient had a single adenoma in the colon resected for the index lesion, the risk of developing a metachronous carcinoma has been said to double. Tumor registries have been invaluable in assisting the recall of cancer patients for periodic re-evaluation.

Frequency of follow-up

Opinions vary as to the frequency and extent of follow-up examinations. An acceptable schema for follow-up examinations is every three months for two to three years, every six months for the next three years, and annually thereafter.

Physical examination

The follow-up examination should include a detailed history of pain, change in bowel habits, appetite, weight change, abdominal girth, fever, chills, cough or dyspnea, general feeling of well-being, and appearance of blood in the stools. Physical examination should be directed to lymph nodes, chest, weight, abdomen, and rectum.

CONSIDERATIONS FOR FEMALE PATIENTS
It should be borne in mind that female patients with colon or rectal cancer have a predilection to the development of breast, uterine, and ovarian cancer; and attention should be directed to these organs as well. Annual pelvic and breast examinations, including mammograms and Papanicolaou smears, should be done.

Laboratory studies

ROUTINE STUDIES
Laboratory studies to be considered are quarterly CBC, BUN or

creatinine, and liver function studies. The carcinoembryonic antigen (CEA) test should be used as an indicator of residual or recurrent carcinoma. If it was elevated preoperatively, it should fall to normal within two to three months postoperatively. If it fails to return to normal postoperatively, a diligent search should be made for residual disease. If it falls to normal postoperatively, a persistent secondary rise is an indication that recurrent carcinoma or a second primary carcinoma may be present, and a complete reevaluation is indicated.

FECAL OCCULT BLOOD TEST

Since patients with prior colon carcinoma are already in the high-risk group for recurrence or a second primary carcinoma, the fecal occult blood test is not so important as in asymptomatic people. If it is used and is positive, it may lead to re-evaluation at an earlier time than scheduled, but care should be taken that a negative test does not lead to a false sense of security and neglect of needed follow-up examinations.

COLONOSCOPY

If a complete colonoscopy was not done preoperatively, it should be done soon after the resection of an index case of carcinoma of the colon in order to detect concurrent (synchronous) primary carcinoma or adenomas. The rate of synchronous carcinomas of the colon has been reported as high as 7.2%.

If a complete colonoscopy was performed preoperatively, it should be repeated yearly until the colon has been free of adenomas for two years, then every three years thereafter, unless fecal occult blood test or an elevated CEA indicates a need for the examination at an earlier date. If colonoscopy is not available, sigmoidoscopy (preferably flexible) and air contrast barium enema should follow the same time sequence. Rigid sigmoidoscopy may replace flexible sigmoidoscopy, if the latter is not available.

OTHER PROCEDURES

Flexible sigmoidoscopy in the interval years between complete colonoscopy has been recommended to survey the left side of the colon for metachronous carcinomas or polyps, but changing trends in the localization of colonic carcinomas may require a re-evaluation of the role of flexible sigmoidoscopy that is not followed by BE. Routine radionuclide scans, ultrasonography, or CT scanning in the asymptomatic patient may not be cost-effective. A positive CEA or abnormal liver function studies are indications for radionuclide liver scan or, perhaps better, a CT scan of the abdomen and pelvis. Chest x-rays should be obtained annually for five years and as indicated by symptoms and physical findings thereafter.

Gynecologic cancer

Gynecologic Oncology Workgroup
Joseph S. Lancaster, MD, Chairman
Ralph J. Anderson, MD; Charles V. Capen, MD; Robert P. Carter, Jr, MD; J. Stanley Conner, MD; Luis Delclos, MD; Jacob B. Green III, MD; Fred M. Massey, MD; Joseph A. Zavaletta, MD

Contents

53 ENDOMETRIAL CANCER
54 OVARIAN CANCER
55 CERVICAL CANCER

ENDOMETRIAL CANCER

Incidence
Most common gynecologic malignancy (13% of all cancers).
One out of 45 women will develop endometrial carcinoma in her lifetime.
Age: 75% of patients over age 50; 2%-5% of patients under age 40.

Etiologic factors
Triad of obesity, diabetes and hypertension
Chronic anovulation
Nulliparity
Unopposed estrogen, endogenous or exogenous

Symptoms
Abnormal uterine bleeding, usually perimenopausal or postmenopausal

Diagnosis
High-risk patients (see Etiologic factors) should have endometrial sampling.
Premenopausal patient with endometrial cancer cells on Papanicolaou smear requires further investigation.
Postmenopausal patient with endometrial cells whether benign or malignant in vaginal smears requires further investigation.
Postmenopausal bleeding requires further investigation.
Procedure
- Office
  - Biopsy cervix, sample endocervix and endometrium.
- Hospital
  - Examination under anesthesia, cervical biopsy, fractional dilatation and curettage, progesterone receptors when possible (if not established by outpatient studies)
  - Cystoscopy and sigmoidoscopy for suspected bladder or rectal spread
  - CBC and urinalysis are routine.
  - Chest x-ray
  - Chemistry profile
  - Electrocardiogram (over 40)
  - When indicated: barium enema, lymphangiogram for pelvic and periaortic nodes

Histology
Adenocarcinoma 70%
Adenoacanthoma 15%
Adenosquamous 8%
Papillary 6%
Clear cell carcinoma 1%

Staging FIGO
(International Federation of Gynecology and Obstetrics) as accepted by American Joint Committee
Stage 0: Carcinoma in situ; histologic findings are suspicious of malignancy. Cases of stage 0 should not be included in any therapeutic statistics.
Stage I: Carcinoma confined to the corpus.
- Stage IA: The length of the uterine cavity is 8 cm or less.
- Stage IB: The length of the uterine cavity is more than 8 cm.
- Subgroup:
  - G1: Highly differentiated adenomatous carcinoma.
  - G2: Differentiated adenomatous carcinoma with partly solid areas.
  - G3: Predominantly solid or entirely undifferentiated carcinoma.

Stage II: Carcinoma has involved the corpus and the cervix, but has not extended outside the uterus.
Stage III: Carcinoma has extended outside the uterus, but not ouside the true pelvis.*
Stage IV: Carcinoma has extended outside the true pelvis or has obviously involved the mucosa of the bladder or rectum. Bullous edema as such does not permit a case to be allotted to stage IV.
- Stage IVA: Spread of the growth to adjacent organs.
- Stage IVB: Spread to distant organs.

Extension of the carcinoma to the endocervix is confirmed by fractional curettage; scraping the cervix should be the first step of the curettage and the specimen from the cervix should be examined separately. Cervical biopsy should be performed, if not performed previously.

Management and treatment
Stage 0
- There is growing evidence that estrogens plus progesterones can prevent adenomatous hyperplasia.
- Thorough dilation and curettage followed by progesterone therapy, endometrial sampling when preservation of fertility is important.
- Abdominal or vaginal hysterectomy.

Stage I
- G1 adenocarcinoma with no invasion or superficial invasion can be managed by hysterectomy and bilateral salpingo-oophorectomy.

All other stages
- Refer for surgical staging, peritoneal cytology, pelvic and periaortic lymph node sampling, and multimodal therapy (combination pre- or postoperative radiation therapy, hormonal therapy, and/or chemotherapy).

*The presence of metastasis in the vagina or in the ovary is classified as stage III.

Prognosis
Stage IA and IB
  G1-2—up to 95% five-year survival
  G3—60%-70% five-year survival
Stage II
  Five-year survival up to 75%
Stage III
  Five-year survival up to 30%
Stage IV
  Five-year survival up to 5%

Follow-up
History and physical examination six weeks after surgery, then every three months for 18 months, every four months for 18 months, every six months for 24 months, then yearly thereafter.
Vaginal cytology and chest x-ray every six months for one year, then annually.
Other studies as clinically indicated.

OVARIAN CANCER

Incidence
24% of gynecologic malignancies.
14,000 new cases a year.
Responsible for 47% of deaths due to gynecologic malignancies.
Greatest incidence in women 40 to 65 years of age.

Symptoms
2%-25% of patients have no symptoms.
Non-specific—pain, abdominal distention and swelling, abnormal uterine bleeding, urinary tract and gastrointestinal tract disturbances.

Signs
Abdominal mass
Pelvic mass
Ascites
Postmenopausal palpable ovary syndrome (PMPO). Any ovary that is palpable in a postmenopausal woman is suspicious for ovarian carcinoma and requires investigation.

Diagnosis
Requires exploratory laparotomy (see Management and treatment).
Studies
  Initial presentation of suspected ovarian cancer
    CBC, urinalysis are routine
    Chest x-ray
    Chemistry profile
    Electrocardiogram (over 40)
    IVP
    Barium enema
  When indicated
    Bone scan
    Liver/spleen scan
    CT scan
    Upper gastrointestinal series
    Cystoscopy
    Proctosigmoidoscopy

Histology
Germinal epithelial tumors
Germ cell tumors
Gonadal stromal tumors
Metastatic tumors

Staging FIGO
(International Federation of Gynecology and Obstetrics) as accepted by the American Joint Committee
Stage I: Growth limited to the ovaries.
  Stage IA: Growth limited to one ovary; no ascites.
    No tumor on the external surface; capsule intact.
    Tumor present on the external surface or capsule(s), ruptured, or both.
  Stage IB: Growth limited to both ovaries; no ascites.
    No tumor on the external surface; capsule intact.
    Tumor present on the external surface or capsule(s), ruptured, or both.
  Stage IC: Tumor either stage IA or IB, but with ascites present or positive peritoneal washings.
Stage II: Growth involving one or both ovaries with pelvic extension.
  Stage IIA: Extension and/or metastasis to the uterus and/or tubes.
  Stage IIB: Extension to other pelvic tissues.
  Stage IIC: Tumor either stage IIA or IIB, but with ascites present or positive peritoneal washings.
Stage III: Growth involving one or both ovaries with intraperitoneal metastasis outside the pelvis, or positive retroperitoneal nodes, or both. Tumor limited to the true pelvis with histologically proven malignant extension to small bowel or omentum.
Stage IV: Growth involving one or both ovaries with distant metastases. If pleural effusion present, there must be positive cytology to allot a case to stage IV. Parenchymal liver metastasis equals stage IV.
Special Category: Unexplored cases that are thought to be ovarian carcinoma.

Management and treatment
All patients with suspected ovarian cancer should have laparotomy. No preoperative laboratory data or findings should preclude operation. The surgeons operating on such a patient should be prepared to perform omentectomy, total abdominal hysterectomy with bilateral salpingo-oophorectomy, multiple tissue biopsies, retroperitoneal lymph node biopsies, aggressive tumor debulking including bowel resection, etc. If the surgeons feel unable to do this, the patient should be referred prior to the first operation.
Preservation of childbearing function in selected cases.
Postoperative chemotherapy or radiotherapy.

Prognosis
Dependent upon histologic grade of tumor, cellular differentiation and amount of residual disease following initial surgical approach.
Five-year survival
Stage I—40%–88%
Stage II—13%–69%
Stage III—0%–17%

CERVICAL CANCER

Incidence
Second most common gynecologic malignancy (28% of primary gynecologic malignancy)
Sixth among all cancers in women
Average age: Non-invasive—late 20s and early 30s; invasive—late 30s and early 40s

Etiologic factors
Socioeconomic
Increased in lower socioeconomic population regardless of race
Cultural
Early age (13–17) first coitus, multiple partners, multiple marriages
Infections
Herpes simplex virus type 2
Human papilloma virus (condyloma, venereal warts)

Symptoms
Most intraepithelial (pre-invasive) lesions are asymptomatic.
Vaginal bleeding (intermenstrual or post-coital), vaginal discharge (serosanguinous or yellowish), or dyspareunia are manifestations of invasive carcinoma.

Screening procedures
The Papanicolaou (Pap) smear
The Pap smear is a screening tool.
First Pap smear when patient becomes sexually active or age 18.
An endocervical-ectocervical scrape on the same slide is adequate to screen for cervical cancer.
The squamocolumnar junction is at particularly high risk for the development of cervical cancer.
Most pathologists evaluate and describe the cytologic changes instead of using rigid classifications.
Every woman should have regular Pap smears when she becomes sexually active.
Patients with negative smears should have annual Pap smears.
All patients with abnormal Pap smears (dysplasia or atypical cells not secondary to inflammation) should be referred for colposcopic evaluation.
Biopsy
A normal Pap smear in the presence of a visible lesion does not rule out carcinoma.
All lesions should be biopsied.

Histology
Squamous cell carcinoma—90%
Adenocarcinoma—5%
Adenosquamous carcinoma—5%

Staging FIGO
(International Federation of Gynecology and Obstetrics) as accepted by American Joint Committee
Stage 0: Carcinoma in situ, intraepithelial carcinoma.
Stage I: The carcinoma is strictly confined to the cervix (extension to the corpus should be disregarded).
Stage IA: Microinvasive carcinoma (under 3 mm or confined to one high-power field, and no vascular or lymphatic involvement).
Stage IB: All other cases of stage I; occult cancer should be marked "occ."
Stage II: The carcinoma extends beyond the cervix but has not extended to the pelvic wall. The carcinoma involves the vagina, but not as far as the lower third.
Stage IIA: No obvious parametrial involvement, vaginal involvement; vagina.
Stage IIB: Obvious parametrial involvement, but not pelvic wall; vagina.
Stage III: The carcinoma has extended to the pelvic wall. On rectal examination, there is no cancer-free space between the tumor and the pelvic wall. The tumor involves the lower third of the vagina. All cases with a hydronephrosis or non-functioning kidney are included.
Stage IIIA: No extension to the pelvic wall, lower third of vagina.
Stage IIIB: Extension to the pelvic wall and/or hydronephrosis or non-functioning kidney.
Stage IV: The carcinoma has extended beyond the true pelvis or has clinically involved the mucosa of the bladder or rectum. Bullous edema as such does not permit a case to be allotted to Stage IV.
Stage IVA: Spread of the growth to adjacent organs.
Stage IVB: Spread to distant organs.

Staging TNM
(TNM Committee of the International Union Against Cancer)

Primary tumor (T)
TIS: Carcinoma in situ; intraepithelial carcinoma.
T1
T1a, N0, M0
T1b, N0, M0
T2
T2a, N0, M0
T2b, N0, M0
T3
T3a, N0, M0
T3b, N0-N1, M0
T4
T4a, NX-N1, M0
Any T, Any N, M1
Nodal involvement (N)
NX: Not possible to assess the regional nodes

N0: No involvement of regional nodes
N1: Evidence of regional node involvement
N4: Involvement of lumbo-aortic nodes

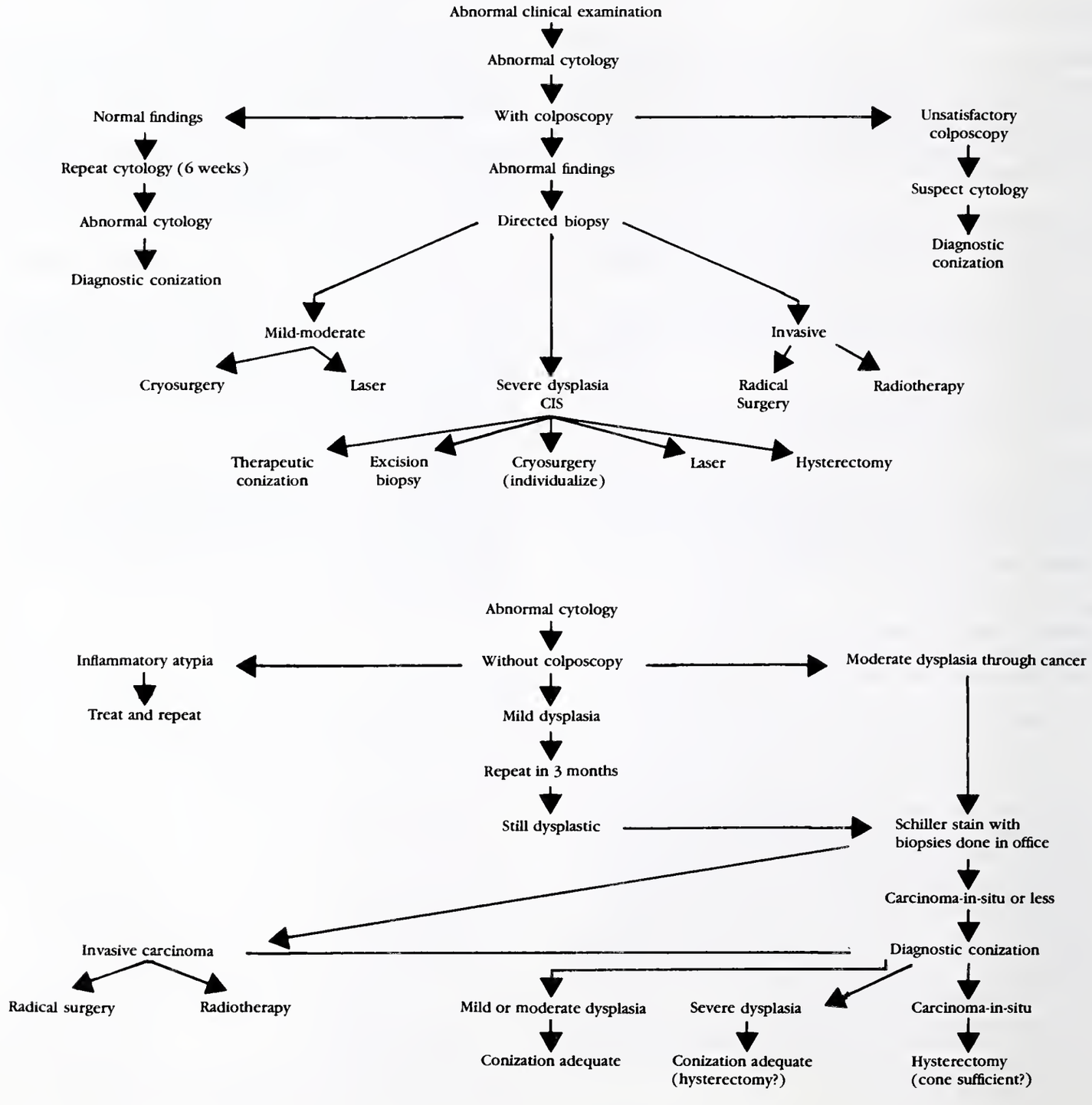
Distant metastasis (M)

MX: Minimum requirements to assess the presence of distant metastasis cannot be met
M0: No known distant metastasis
M1: Distant metastasis present (specify site)

Management of abnormal Papanicolaou smear

See Fig 1.

1. Management of patient with abnormal Papinicolaou smear.



Management and treatment

Stage 0 cervical cancer
- Properly treated, tumor control of in situ cervical carcinoma should be 100%.
- Options
  - Cryosurgery
  - Conization
  - Laser therapy
  - Total abdominal or vaginal hysterectomy
  - Radiation therapy

All patients with invasive cancer referred to appropriate specialist or treatment center

Stage IA cervical cancer
- Total hysterectomy if depth of invasion is less than 3 mm with no vascular or lymphatic invasion noted, the frequency of lymph node involvement is sufficiently low that lymph node dissection is not required. Oophorectomy is optional and may be deferred for younger women.
- Intracavitary radiation alone if the depth of invasion is less than 3 mm, the frequency of lymph node involvement is sufficiently low that external beam radiation is not required.
- Conservative management in selected cases if childbearing essential

Stage IB cervical cancer
- Either radiation therapy or radical hysterectomy and bilateral lymph node dissection in experienced hands results in cure rates of 85%–90%.
- Intracavitary radiation combined with external beam pelvic irradiation; a portion of the latter is delivered prior to intracavitary therapy if the cervical lesion is bulky, exophytic, easily bleeding, necrotic, or infected.
- Radical hysterectomy and pelvic lymphadenectomy: the value of postoperative external beam radiation in those patients having positive nodes is uncertain.

Stage IIA cervical cancer
- Either radiation therapy or radical hysterectomy in experienced hands results in cure rates of 75%–80%.
- Intracavitary radiation combined with external beam pelvic irradiation; the latter is delivered prior to intracavitary therapy if the cervical lesion is bulky, exophytic, easily bleeding, necrotic, or infected.
- Radical hysterectomy and pelvic lymphadenectomy: the value of postoperative external beam radiation in those patients having positive nodes is uncertain.

Stage IIB, III, IVA cervical cancer
- The treatment of choice is radiation therapy.

Stage IVB cervical cancer
- Chemotherapy
- Radiation therapy may be used to palliate disease.

Recurrent cervical cancer
- Chemotherapy
- Pelvic exenteration for locally recurrent disease can lead to a five-year survival in 40%–50% of selected cases.

Cervical carcinoma and pregnancy

Incidence
- Approximately 1.9% of patients with cervical carcinoma will become pregnant. Approximately 0.04% of patients who are pregnant will have carcinoma.

Age
- Average age is 33 years.

Treatment
- Stage 0
- Vaginal delivery at term; definitive surgical management after six weeks postpartum.
- Stage IA
- Shallow conization
- Stage IB
  1. First trimester
     a. Radiation therapy is the same as for non-pregnant and may or may not be preceded by dilation and curettage.
     b. Radical hysterectomy with bilateral pelvic lymphadenectomy with or without bilateral salpingo-oophorectomy, depending on the patient's age.
  2. Second trimester
     a. Hysterectomy may precede the radiation therapy.
     b. Radiation therapy regardless of pregnancy.
     c. Radical hysterectomy with bilateral pelvic lymphadenectomy with or without bilateral salpingo-oophorectomy, depending on the patient's age.
  3. Third trimester
     a. Wait for fetal viability.
     b. Classical cesarean followed by appropriate radiation therapy or surgery as above.
- Stages II, III, IV
  1. First trimester
     Radiation therapy same as for non-pregnant patients; may or may not be preceded by dilation and curettage.
  2. Second trimester
     Radiation therapy same as for non-pregnant patients; may or may not be preceded by hysterectomy.
  3. Third trimester
     a. Classical cesarean followed by radiation therapy.
     b. Radical cesarean hysterectomy with bilateral pelvic lymphadenectomy with or without bilateral salpingo-oophorectomy.
     c. Occasionally total pelvic exenteration.

Survival
- a. Age, pregnancy, and trimester have no proven effect upon survival.
- b. Most important factor is the clinical stage of the disease.
- c. Survival rate, stage for stage, is the same as for the non-pregnant patient.

Follow-up
- Examination
  1. Thorough general examination

2. Lymph node examination
3. Pelvic examination
4. Pap smear
5. Colposcopy

Interval

1. Three-month interval for 18 months
2. Four-month interval for 18 months
3. Six-month interval for 24 months
4. Yearly thereafter

Hematology-oncology

Hematology-Oncology Workgroup
Frank H. Gardner, MD, Chairman
Jack B. Alperin, MD; James A. Belli, MD; Patrick C. Farley, MD; Eugene P. Frenkel, MD; John R. Redman, MD; G. David Roodman, MD; David A. Sears, MD; Arthur A. Trowbridge, Jr, MD

Contents

59 MYELODYSPLASTIC SYNDROME
60 ADULT ACUTE LYMPHOCYTIC LEUKEMIA
61 ADULT ACUTE NONLYMPHOCYTIC LEUKEMIA
62 NON-HODGKIN'S LYMPHOMAS
64 PLASMA CELL NEOPLASM
67 CHRONIC LYMPHOCYTIC LEUKEMIA
69 HODGKIN'S DISEASE
70 CHRONIC GRANULOCYTIC LEUKEMIA

MYELODYSPLASTIC SYNDROME

Introduction

The diagnosis of myelodysplastic syndrome (also termed preleukemia, refractory anemia, refractory cytopenias, refractory anemia with excess blasts, etc) has taken on epidemic proportions, because it is all too commonly used to label any peripheral cytopenia(s) with uncertain mechanism and because absolute clinical and laboratory criteria do not yet exist. The heterogeneity of names strongly suggests that a number of pathogenetic mechanisms express the same pattern known as the myelodysplastic syndrome. The term pre-leukemia, commonly applied to a subset of these patients, has suffered because less than one-third actually progress to leukemia, and firm predictive criteria of the natural history are lacking.

Clinically, patients with the myelodysplastic syndrome present with symptoms directly attributable to the one or more cytopenias found in the peripheral blood, and the severity of the symptoms correlates well with the degree of the identified anemia, thrombocytopenia, or leukemia.

Epidemiology and etiology

In most patients, no etiologic basis can be identified. In some, prior therapy with radiation or cytoreductive chemotherapy (usually for some other neoplasm, occasionally as an immunosuppressive measure) or occupational exposure (for example, benzene) has occurred with a temporal pattern strongly supporting a causal basis for the subsequent myelodysplasia. A causal mechanism is highlighted by the common recognition of certain chromosome aberrations in these patients.

Although the role of chromosome abnormalities in the pathogenesis of the myelodysplasia is not known, the nonrandom changes suggest a relationship. The pathogenesis of the lesion appears to relate to the development of a defect in the hematopoietic stem cell, which results in a definable clonal origin and is expressed as ineffective hematopoiesis and resultant circulating cytopenia(s). Progression to a true neoplastic transformation (ie, leukemia) occurs in some, presumably due to genetic instability and clonal succession, which results in unregulated proliferation with defective cellular maturation.

Detection and diagnosis

CLINICAL CHARACTERISTICS

Patients are identified because of symptoms referable to their cytopenias or, in the absence of symptoms, because a blood count was performed for other reasons. The usual patient is a man well over 40 years of age with an insidious onset of weakness and fatigue relating to the anemia identified in approximately 85% of patients at the time of diagnosis. Although neutropenia is seen in nearly 50% of cases, significant infections or bleeding due to the thrombocytopenia (seen in 25%) are uncommon presentations. The clinical picture is so subtle that often the lesion goes undetected for long periods in the elderly. The symptom complex is not only slow in onset but nondescript, with few localized complaints, although rarely a fever of unknown origin without identifiable infection is the symptom complex manifested.

Physical examination is usually unremarkable except for the findings relative to the anemia or, less commonly, the finding of petechiae and purpura due to the thrombocytopenia. Approximately 10% of patients with myelodysplasia have splenomegaly (usually less than 4–6 cm beneath the left costal margin), and about 5% have modest degrees of hepatomegaly.

LABORATORY CHARACTERISTICS

Ineffective hematopoiesis and abnormal chromosomes are the hallmark of myelodysplasia. The anemia seen in 85% of cases is generally mild (hemoglobin 8–11 g/dl [80–110 g/L]) with slight macrocytosis (mean corpuscular volume 94–104) and significant anisocytosis and poikilocytosis. Neutropenia, seen in 50% of cases, is commonly associated with Pelger-Huet changes in the neutrophils, loss of neutrophilic granules, and an increase in circulating monocytes. Thrombocytopenia, seen in about 25% of cases, is usually mild (platelets 30,000–90,000/μL). The ineffective hematopoiesis is highlighted by increased cellularity of the bone marrow, commonly with a slight shift toward more immature cells. Red cell maturation is often seen to be megaloblas*toid*, that is, defective nuclear maturation without the features of a true megaloblastic lesion. In some cases, sideroblastic changes are prominent. One subtype of myelodysplasia (refractory anemia with excess blasts) is associated with increased numbers of myeloblasts (representing 5%–40%); clearly, leukemic evolution is most common in this group. Megakaryocytes usually are abnormal with predominance of uninuclear forms.

In spite of extensive laboratory examination, definitive features are lacking; virtually all of the changes are those expected in ineffective hematopoiesis. One feature, the behavior of myeloid cells in culture, has been used to try and predict malignant transformation. Thus, in those cases where the myeloid cells in culture have decreased granulocyte-monocyte growth patterns, short survival and leukemia transformation are common.

Cytogenetics has become an important facet of the clinical evaluation of these patients. At least one third of patients with myelodysplasia have non-random chromosome changes. Clearly, these are most common in patients with previous chemical or radiation exposure. Certain chromosome aberrations have been especially common, and these include monosomy 5 (or $5q^-$), 7 (or $7q^-$) and translocation of 1;7 (t[1;7]). The role of these changes in the pathogenesis or perpetuation of the abnormal clone is unknown. Although some have taken the absence of such changes in all cases to propose that the changes are therefore secondary, the heterogeneity of the lesion and the growing recognition of non-random chromosome aberrations cautions against hasty judgement.

Classification

Although five subclassifications of the myelodysplastic syndrome have been proposed (refractory anemia [RA], refractory anemia with ring sideroblasts, refractory anemia with excess blasts [RAEB], chromic myelomonocytic leukemia [CMML], and RAEB in transformation), the criteria for such subclassifications are not absolute; these efforts best rest in the research domain.

In light of the recognition that this, by definition, is a premalignant rather than clearly malignant lesion at diagnosis, TNM classification does not apply.

Principles of treatment

No specific therapy exists and no treatment is known that can limit the transition from myelodysplastic syndrome to acute leukemia. Therapy is supportive, the most common being transfusions for symptomatic anemia. The addition of a variety of hematemics has not affected the clinical status.

Research into agents capable of inducing cellular differentiation (for example, retinoids, low-dose cytosine arabinoside, vitamin D analogues), cytoreductive agents and bone marrow transplantation to date have not yet identified an effective therapeutic modality, although each of the above have had occasional palliative success.

Results and prognosis

As expected in a heterogenous syndrome, the range of survival is broad (four months to greater than 15 years) with a mean of approximately 36 months. Those patients who present with greater than 10% myeloblasts in the marrow or significant thrombocytopenia have a somewhat worse prognosis, with a median survival of approximately 12 months. Finally, that fraction of patients (approximately 25%) who progress to frank acute leukemia have a poorer response to antileukemic therapy and a poorer survival than seen in de novo leukemia.

ADULT ACUTE LYMPHOCYTIC LEUKEMIA

Introduction

Acute lymphocytic leukemia (ALL) is a malignant disease of primitive lymphopoietic progenitors. Although predominantly a disease of childhood (peak incidence 2 to 10 years of age), ALL accounts for 13% – 17% of all cases of acute leukemia in adults.

Epidemiology and etiology

The most frequent type of ALL in adults is null cell ALL, in which the cells express neither T- nor B-lymphocyte markers. Many of these malignant lymphocytes will express the distinct membrane glycoprotein, CALLA, the common ALL antigen. T-cell ALL constitutes 10% – 15% of all ALL. B-cell ALL is the rarest type of ALL, with a frequency of less than 5%. Recently, first in Japan and now also in the United States, a type of T-cell ALL has been described and shown to be caused by a human leukemia virus, HTLV-1 or HTLV-2. However, for the overwhelming majority of patients with ALL, the etiology is unknown.

Detection and diagnosis

CLINICAL FEATURES

Nonspecific fatigue and weakness are the most common presenting symptoms. Fever, weight loss, bruising, and petechiae are also frequent complaints. Central nervous system involvement may be manifested by headache, nausea, vomiting, blurred vision, or cranial nerve dysfunction. Bone pain, abdominal fullness reflecting hepatosplenomegaly, constipation, and oliguria may also occur. Pallor, petechiae, and purpura are frequent findings on physical examination. Sternal tenderness, lymphadenopathy, and hepatosplenomegaly may also be present. Meningismus may be present and suggests central nervous system involvement.

LABORATORY STUDIES

Bone marrow examination is required for the diagnosis. Usually the bone marrow is hypercellular and contains at least 30% blasts. Special cytochemical stains should be done to verify that the disease is not acute nonlymphocytic leukemia. Cytogenetics should be done to look for the Philadelphia chromosome or other chromosome abnormalities. The complete blood count will usually show a normochromic, normocytic anemia, decreased platelets, and either an increased (in 60% of patients), a normal (in 15%), or a decreased white blood cell count (in 25% of patients). Circulating blasts are commonly seen. Renal and liver function tests, serum uric acid, calcium, phosphorus, and magnesium levels should be obtained. Coagulation tests are also imperative. An estimate of terminal deoxynucleotide transferase in the blasts should also be done. Chest x-ray to look for leukemic or infectious infiltrates and bone films of painful or tender areas are important. A lumbar puncture should be done to rule out CNS involvement.

Classification

There is no staging system for ALL. Cell surface markers are done to classify the ALL as null cell, CALLA positive, T-cell or B-cell ALL.

Principles of treatment

Initial treatment with vincristine, prednisone, anthracycline +/− asparaginase is usually employed. After obtaining a complete remission, intensive consolidation therapy (usually with ara-C and 6-thioguanine) is done. Maintenance therapy then consists of cyclic therapy using multiple drugs. CNS pro-

phylaxis is important to treat sanctuary disease and currently is done with intrathecal methotrexate or ara-C. After completing the two- to three-year course of chemotherapy, patients should be followed closely with frequent blood and bone marrow examinations.

Results and prognosis

Of adults with ALL 60%–80% will obtain a complete remission with appropriate chemotherapy. Approximately 30% can be expected to survive two years, with a 50% three-year survival in selected patients. The median duration of remission is 18 months. Because of the low percentage of long-term survivors, autologous or allogenic bone marrow transplantation is being investigated.

Resources

Facilities that must be available include (1) a blood bank capable of rendering red cell and platelet support, (2) a bone marrow transplant unit, and (3) a highly skilled center with experience in treating ALL and its infectious complications.

ADULT ACUTE NONLYMPHOCYTIC LEUKEMIA

Introduction

In adults, acute leukemias are conveniently divided into two categories: acute lymphocytic leukemia and acute nonlymphocytic leukemia (ANLL), which includes all other acute leukemias. While there are some differences in the clinical features of the leukemias making up ANLL, they are considered together, because antileukemic therapy is the same for all members of the group.

Epidemiology and etiology

The estimated incidence of ANLL in the US is two to four cases per 100,000 population per year. The incidence is somewhat greater in men than women and in Caucasians than blacks. The etiology is not known; it is almost certainly multifactorial. Risk factors include prior exposure to ionizing radiation, immune deficiency, chronic benzene exposure, and prior treatment with cancer chemotherapeutic drugs, particularly alkylating agents. ANLL is a clonal disorder of cell growth in which there is malignant transformation of a pluripotent stem cell, such as a precursor cell for granulocytic, monocytic, erythrocytic, and megakaryocytic cell lines. The manifestations of the disease are due largely to the malignant cell proliferation and the secondary absence of normal mature cells resulting from suppression of normal hematopoiesis.

Detection and diagnosis

The most common symptoms and signs at presentation are those related to anemia (ease of fatigue, pallor, tachycardia), granulocytopenia (infection, fever), and thrombocytopenia (easy bleeding, purpura, petechiae, occasionally major hemorrhage). Anorexia and weight loss are common but are rarely presenting complaints. Less frequent findings include bone pain, gingival swelling, hepatosplenomegaly, and lymphadenopathy. There is no specific screening for ANLL; detection occurs during routine check-ups or as a result of investigation of the above symptoms or signs.

Virtually all the presenting manifestations of ANLL are nonspecific, and diagnosis requires routine laboratory tests followed by specialized tests on blood and bone marrow. Blood counts show anemia and thrombocytopenia in the large majority of patients. The white blood cell count is elevated (over 50% of all patients), decreased (over 25%), or normal. The diagnosis depends on the identification of leukemic blast cells, usually in both the blood and bone marrow, rarely in the marrow alone. Diagnostic distinctions that must be made from the cellular morphology of the blood and bone marrow include: (1) distinguishing between acute leukemia and the myelodysplastic syndromes (pre-leukemia, smoldering leukemia, refractory anemia with excess blasts, and certain other disorders), (2) distinguishing between acute lymphocytic leukemia and ANLL, and (3) determining the subtype of ANLL (see classification below). Since these may be difficult distinctions, proper collection, preparation, and staining of blood and marrow material are essential. Blood smears, smears of aspirated bone marrow, and bone marrow biopsy sections stained by standard methods are needed; and special stains are usually necessary. Other specialized studies that are useful in individual cases are cytogenetic analysis of marrow or blood, electron microscopy, immunological testing for surface markers on the leukemic cells, and (rarely) cell culture studies for assessment of colony growth patterns. Chromosomal abnormalities are frequent, and some are specific for certain subtypes of ANLL.

Certain other laboratory studies may be important in ANLL, such as serum uric acid, tests of hemostasis for disseminated intravascular coagulation, and serum and urine lysozyme.

Classification

The FAB classification was devised by the French-American-British leukemia cooperative study group and is now in widespread use. It is shown below in its current modified form.

- M1: Acute myelocytic leukemia without maturation.
- M2: Acute myelocytic leukemia with maturation to or beyond the promyelocyte stage.
- M3: Hypergranular promyelocytic leukemia. A "microgranular" variant has also been described.
- M4: Acute myelomonocytic leukemia. A variant with eosinophilia has been described.
- M5: Acute monocytic leukemia. Poorly differentiated and differentiated subgroups have been described.
- M6: Erythroleukemia.
- M7: Acute megakaryocytic leukemia.

Principles of treatment

The primary goal of treatment in ANLL is complete bone marrow remission, that state in which blast cells are reduced to fewer than 5% of marrow cells and normal production of red cells, white cells and platelets has been restored. Complete remission signals a decrease in the leukemic cell population by 100- to 1,000-fold, from 10^{12} to 10^{10} or 10^{9} cells. To achieve complete remission with cytotoxic chemotherapy, it is necessary to produce virtual aplasia of the bone marrow. This is accomplished by administration of combinations of drugs in

defined courses. Therapy is described by the following terms: *induction* (full-dose chemotherapy to produce marrow aplasia and induce complete remission), *consolidation* (one to three courses of the drugs used for induction therapy, usually at lower doses, given after complete remission is attained), and *maintenance* (chemotherapy given for months to years while the patient continues in remission). Eventually all therapy is discontinued, commonly after three years of complete remission. A variety of chemotherapeutic combinations have been utilized and are being tested for induction therapy. As an example, one current regimen calls for daunorubicin, given in daily intravenous doses for three days, cytosine arabinoside, given as a constant intravenous infusion for seven days, and 6-thioguanine, given orally for seven days.

Bone marrow transplantation now provides an alternative to consolidation and maintenance chemotherapy for some ANLL patients in their first complete remission. Major factors influencing a decision for this form of therapy are availability of the procedure, availability of a donor, and age of the patient. Except in certain experimental circumstances, the donor must be a histocompatible sibling, and the patient should be under 40 years of age. Patients with ANLL in remission are prepared for transplantation by total body irradiation and large doses of cytotoxic chemotherapeutic drugs given for a few days before transplantation to eliminate any remaining leukemic cells and to suppress immune responses to the foreign graft. After successful engraftment, cytotoxic immunosuppressive drugs are given to prevent or limit graft-versus-host disease.

Supportive care is crucial for all ANLL patients. It includes transfusion for cytopenias and proper diagnosis and treatment of the inevitable infectious complications. Transfusion of red blood cells and platelets is necessary in almost every patient. Transfusion of granulocytes may be used as an adjunct to antibiotic therapy in the treatment of serious infections. Most patients are given allopurinol to reduce the risks of hyperuricemia. In specific cases, other types of therapy may be important; for example, heparin may be used to treat disseminated intravascular coagulation in acute promyelocytic leukemia. Patients with very high leukemic blast cell counts, eg, over 100,000/cu mm, are at risk for "leukostasis" and organ damage (particularly of the brain) due to vascular occlusion and/or hemorrhage. Specific therapy, such as leukapheresis or cytotoxic therapy, may be necessary. The patient with ANLL is followed during all stages of therapy by blood counts and examination of the peripheral blood smear and bone marrow. Since the peripheral blood may reflect the state of the leukemic process in the marrow poorly and late, periodic reexamination of the bone marrow is absolutely necessary to guide therapy.

When a patient in complete remission suffers leukemic relapse, *reinduction* therapy is undertaken, either with the same drugs used originally or different agents, depending on the assessment of the state of refractoriness of the leukemia to the specific drugs.

Results and prognosis

Factors present at the time of diagnosis which have an adverse effect on prognosis include the following: increasing age, the presence of systemic infection, very high white blood cell count (eg, over 100,000/cu mm), ANLL due to the "blastic" transformation of chronic myelocytic leukemia, and ANLL secondary to previous chemotherapy.

The attainment of complete remission clearly enhances prognosis in adult ANLL. At present, complete remission is achieved in 50%–80% of patients. Median survival for those patients is 12–16 months. The longer the remission persists, the less likely relapse is to occur. After three years of complete remission, relapse is uncommon. Ten percent to 20% of all patients have prolonged survival and may be considered cured.

The chances of long-term survival after bone marrow transplantation in first remission are somewhat higher, particularly for young patients (less than 25 years of age). The risks of leukemic relapse are reduced, but those of early death are greater due to graft-versus-host disease or other complication.

The prognosis for relapsed patients is poor. While as many as 25% may achieve a second remission, these remissions are usually of short duration.

Special facilities

NECESSARY

Expertise in preparing and interpreting blood and bone marrow smears and biopsies with routine and special stains.

Blood bank support to permit transfusion of large volumes of red blood cells and platelets from random donors.

Laboratory facilities for the culture and identification of a wide variety of infectious agents which may cause disease in the granulocytopenic (leukemic) host.

Facilities for cytogenetic analysis of bone marrow and peripheral blood.

DESIRABLE

Blood bank support to harvest granulocytes or platelets from single donors for transfusion.

Leukapheresis capability.

Electron microscopy.

NON-HODGKIN'S LYMPHOMAS

Introduction

Malignant lymphomas are a diverse group of malignancies that have in common the fact that they are all tumors of the immune system. Lymphomas are diagnosed in all age groups (average age = 42 years) and account for 24,000 cases of cancer per year in the United States. There is a significant economic and social impact because of the relatively young age of this population, and this is likely to become more important because the incidence of this disease is increasing. The heterogeneity of malignant lymphomas is reflected in current treatment results. Although combination chemotherapy is now curative in the majority of patients with diffuse aggressive lymphomas, the treatment of nodular lymphomas has made minimal impact on survival.

Epidemiology and etiology

Although all age groups are affected by lymphoma, there is a

nadir in the teenage years and then an incidence which increases logarithmically with age until the ninth decade. The disease is more common in males than females (1.4:1).

The etiology remains unknown. For many years, viruses have been known to cause lymphoma in a number of animal species; however, it is only recently that viruses have been implicated in human lymphomas. An RNA tumor virus, human T-cell leukemia/lymphoma virus (HTLV-1), has been isolated from patients with adult T-cell leukemia/lymphoma, a rare, newly described syndrome, endemic in Japan and also reported in the southeastern United States. Risk factors for lymphoma in general include chronic immunosuppression (eg, renal transplant recipients) and congenital and acquired immune deficiency syndromes.

Detection and diagnosis

CLINICAL DETECTION

Greater than 80% of patients with non-Hodgkin's lymphomas present with palpable lymphadenopathy, usually painless and located in the neck. Most patients are asymptomatic, but 20% may have fever, night sweats or weight loss or a combination of these symptoms. No population screening techniques to facilitate early diagnosis have ever proven to be cost-effective.

DIAGNOSTIC PROCEDURES

Biopsy of an involved tissue, usually lymph node, is the essential diagnostic procedure. Recently introduced tissue immunoperoxidase staining techniques with monoclonal antibodies now allow for immunologic typing of lymphomas and also confirm the diagnosis in cases with equivocal histopathology.

Classification

Many pathologic classifications have been proposed for malignant lymphoma, and this has been a source of much confusion and controversy. Recently, the "Working Formulation" has been developed to simplify and standardize classification. Fig 1 shows its relationship to the Rappaport Classification, which has been the most commonly used system in the United States.

1. Relationship between Working Formulation and Rappaport Classification for pathologic classification of malignant lymphoma

Working Formulation	Rappaport Classification
Low Grade	
A Small lymphocytic (4%)	Diffuse well-differentiated lymphocytic
B Follicular, small cleaved cell (25%)	Nodular poorly-differentiated lymphocytic
C Follicular mixed, small cleaved and large cell (9%)	Nodular mixed lymphocytic histiocytic
Intermediate Grade	
D Follicular, large cell (4%)	Nodular histiocytic
E Diffuse, small cleaved differentiated	Diffuse poorly differentiated cells (8%) lymphocytic
F Diffuse mixed, small and large cell (22%)	Diffuse mixed lymphocytic histiocytic
G Diffuse large cell (22%)	Diffuse histiocytic
High Grade	
H Large cell, immunoblastic (9%)	Diffuse histiocytic
I Lymphoblastic (5%)	Diffuse lymphoblastic
J Small noncleaved cell (6%)	Burkitt's and diffuse undifferentiated

Anatomic staging (stage I through IV) is done using the Ann Arbor staging classification originally devised for Hodgkin's disease. Stage number should be accompanied by a letter signifying symptom status: A = asymptomatic, B = unexplained fever, night sweats or weight loss >10% of body weight. Staging work-up should include history and physical examination (with special attention to lymphatics, splenic and hepatic size). Laboratory tests should include blood count, sedimentation rate, liver and renal function testing. Required studies include chest roentgenography and bone marrow aspirate and biopsy. Bipedal lymphangiography should also be performed, especially in patients who have disease apparently localized to the upper torso. CT scan of the abdomen should be done in most patients and often gives information complementary to lymphangiography. Additional procedures useful in individual cases include chest CT or tomography, abdominal sonography and bone scan. Exploratory laparotomy with splenectomy is rarely required, perhaps only in patients with stage I intermediate and high-grade lymphomas after clinical staging, and only if radiation therapy is planned if the surgery is negative.

Principles of treatment

Selection of treatment is primarily dependent upon histopathological type. Small lymphocytic lymphoma (DWDL) is best considered as equivalent to chronic lymphocytic leukemia and should be managed accordingly. Follicular, small cleaved cell lymphoma (NPDL) is the subject of much controversy regarding treatment. Treatment alternatives include observation in selected patients, single alkylating agent therapy, combination chemotherapy, radiation therapy alone, or combined modality therapy. Patients with early stage disease may be curable and should be considered for intensive therapy. Although patients with stage III and IV disease have a median survival of five to seven years, curability has yet to be convincingly shown. Frequently, this disease is marked by transformation to a diffuse histology which portends a more aggressive course. The intermediate and high-grade diffuse lymphomas have been the focus for the progress made with combination chemotherapy. Untreated, the median survival is measured in months; but with recent combination chemotherapy regimens such as MACOP-B, M-BACOD, and ProMACE-MOPP, 60%–75% of patients with stage II to IV lymphoma are long-term survivors. Management of stage I diffuse lymphoma is controversial as to whether the preferred approach should be radiation alone in the laparotomy-staged patient or combination chemotherapy without laparotomy. Both result in a high percentage (80%–90%) of long-term survivors.

Despite achievement of a complete remission in nodular lymphoma, the subsequent course is frequently marked by relapse several years later. In contrast to this, if a complete remission is achieved in diffuse lymphomas and maintained for two years, it is unusual to have a subsequent relapse. Although responses are frequently achieved with therapy for recurrent disease, it is unusual to have this remission maintained. Cur-

rent investigational treatment options include new drugs, new combinations and dose schedules of known drugs, autologous or allogenic bone marrow transplantation, and immunological therapy approaches such as monoclonal antibodies and interferon.

Follow-up of patients in remission includes history, physical examination, blood counts, and appropriate radiographs to detect relapse. As in Hodgkin's disease, there may be late treatment-related complications (eg, leukemia, sterility, hypothyroidism, cardiac dysfunction), and awareness of these problems is important in preventing morbidity.

Results and prognosis

The heterogeneity of this group of disorders is reflected in their treatment results. The low-grade lymphomas (A,B,C) have a relatively long median survival (four to six years), yet have little probability of cure. Chemotherapy of the diffuse aggressive lymphomas (F,G,H,I,J) has resulted in the most marked success, converting a dismal prognosis into a 60%–75% long-term survival rate. Attaining those results was dependent upon the entrance of patients with lymphoma into clinical trials, and future progress is dependent upon this same factor.

PLASMA CELL NEOPLASM

Introduction

Plasma cell neoplasms are also known as multiple myeloma or plasma cell myeloma. They arise from a neoplastic proliferation of a monoclonal cell of the B-lymphocyte lineage. The homogenous M-protein (M for monoclonal) in the serum protein electrophoresis provides the evidence that the neoplastic cell population has reached a size of at least 5×10^9 and is producing enough protein to be recognized as an M-spike (more than 5 g/L).

There are other M-protein-producing neoplasms of uncontrolled monoclonal proliferation which are much less common than plasma cell myeloma and which have distinct clinical features of their own. These are Waldenstrom's macroglobulinemia, heavy-chain diseases, and some cases of chronic lymphocytic leukemia. In addition, some conditions of a benign nature must be distinguished from myeloma: benign monoclonal gammopathy (also known as monoclonal gammopathy of undetermined significance) is more common than myeloma, particularly among the elderly. Other benign conditions which can produce an M-protein are chronic cold agglutinin syndrome, transient M-protein, and some instances of heavy-chain disease.

Multiple myeloma is a systemic malignancy of plasma cells that is highly treatable but rarely curable. It is curable when it presents as a solitary extramedullary plasmacytoma. The median survival in the prechemotherapy era was about seven months, with few patients surviving ten years. After the introduction of chemotherapy, prognosis improved significantly with median survival of 24–30 months and a ten-year survival of 3%. The disease is staged by assessing the systemic body burden of tumor. Selection of treatment is influenced by the stage of disease, the general health of the patient, and the presence of complications of the illness.

Epidemiology and etiology

Multiple myeloma is characterized by lytic bone lesions, anemia, and homogeneous serum and/or urinary elevations.

EPIDEMIOLOGY

Incidence is an estimated 9,600 new cases in 1983 (4,900 males, 4,700 females). It is the most common lymphoreticular neoplasm in nonwhites and the third most common in whites. Over 90% of cases occur over the age of 40, although cases occur rarely in teenagers.

ETIOLOGY

The homogenous globulin produced by the neoplastic plasma cells suggests the malignant transformation of a single clone of cells derived from B-lymphocyte differentiation. Demonstration of antibody specificity in myeloma globulins, as well as their possession of structural determinants found in immunoglobulins of normal individuals, raises the possibility that the neoplastic cell proliferation might be related to an inappropriate response to an initial antigenic stimulus. Injection of mineral oil or implantation of plastic (Lucite) in certain mouse strains can produce transplantable plasma cell tumors, also associated with homogeneous plasma and urinary globulins. Virus-like particles have been seen in both human and mouse plasma cell tumors, but any etiologic role is obscure.

Detection and diagnosis

The initial approach to the patient is to establish the diagnosis by:

- Detection of a myeloma protein in the serum or urine;
- Detection of more than 10% plasma cells on a bone marrow examination;
- Detection of lytic bone lesions or generalized osteoporosis in skeletal x-rays; and
- Presence of soft tissue plasmacytomas.
- Monoclonal gammopathy of undetermined significance must be distinguished from progressive myeloma.

Classification

STAGE I MULTIPLE MYELOMA

Five-year survival: 25%–40%

Stage I multiple myeloma means all of the following:

- Hemoglobin > 10 g/dl (< 100 g/L)
- Normal serum calcium
- Normal bone structure, or solitary bone plasmacytoma
- Low M-protein production as shown by:
  - IgG < 5.0 g/dl
  - IgA < 3.0 g/dl
  - Urinary kappa or lambda < 4 g/24 hr
- Estimated myeloma cell mass: < 0.6 trillion cells/sq m (low burden)
- The following subclassification of stages is used:
  - A. BUN < 30 mg/dl (10.7 mmol/L of urea), creatinine

< 2.0 mg/dl (176.8 μmol/L)
B. BUN >/= 30 mg/dl (10.7 mmol/L of urea), creatinine >/= 2.0 mg/dl (176.8 μmol/L)

Impaired renal function worsens prognosis regardless of stage.

STAGE II MULTIPLE MYELOMA
Five-year survival: 15%–30%

Stage II multiple myeloma means multiple myeloma that fits in neither stage I nor stage III.

Estimated myeloma cell mass: 0.6—1.2 trillion cells/sq m (intermediate burden)

The following subclassification of stages is used:

A. BUN < 30 mg/dl (10.7 mmol/L of urea), creatinine < 2.0 mg/dl (176.8 μmol/L)
B. BUN >/= 30 mg/dl (10.7 mmol/L of urea), creatinine >/= 2.0 mg/dl (176.8 μmol/L)

Impaired renal function worsens prognosis regardless of stage.

STAGE III MULTIPLE MYELOMA
Five-year survival: 10%–25%

Stage III multiple myeloma means one or more of the following:

Hemoglobin < 8.5 g/dl (85 g/L)
Serum calcium > 12.0 mg/dl (2.99 mmol/L)
More than 3 lytic bone lesions
High M-protein production as shown by:
a. IgG > 7.0 g/dl
b. IgA > 5.0 g/dl
c. Urinary kappa or lambda > 12.0 g/24 hours
Estimated myeloma cell mass: > 1.2 trillion cells/sq m (high burden)

The following subclassification of stages is used:

A. BUN > 30 mg/dl (10.7 mmol/L of urea), creatinine < 2.0 mg/dl (176.8 μmol/L)
B. BUN >/= 30 mg/dl (10.7 mmol/L of urea), creatinine >/= 2.0 mg/dl (176.8 μmol/L)

It has also recently been demonstrated that serum beta 2 microglobulin is a reliable marker for estimation of tumor mass, response to therapy, and prognosis. Because this protein is excreted in the urine, serum levels must be corrected for renal function. Impaired renal function worsens prognosis regardless of stage.

ISOLATED PLASMACYTOMA OF BONE
Five-year disease-free survival: 50%

If a solitary lytic lesion of plasma cells is found on skeletal survey in an otherwise asymptomatic patient, and a bone marrow examination from an uninvolved site contains less than 5% plasma cells, the patient has an isolated plasmacytoma of bone.

EXTRAMEDULLARY PLASMACYTOMA
Five-year disease-free survival: 80%

Patients with isolated plasma cell tumors of soft tissues, most commonly occurring in the tonsils, nasopharynx, or paranasal sinuses, should have skeletal x-rays, bone marrow biopsy, and measurement of serum and urine M-protein before and after local treatment. If these tests are negative, the patient has extramedullary plasmacytoma.

MACROGLOBULINEMIA
Median survival: three plus years

Macroglobulinemia is a proliferation of plasmacytoid lymphocytes secreting an IgM M-protein. Patients usually have lymphadenopathy and splenomegaly, but bony lesions are uncommon. There is no generally accepted staging system.

MONOCLONAL GAMMOPATHY OF UNDETERMINED SIGNIFICANCE
Patients with monoclonal gammopathy of undetermined significance have an M-protein in the serum without symptoms or findings of multiple myeloma, macroglobulinemia, amyloidosis, or lymphoma, and with fewer than 10% plasma cells in the bone marrow.

Cellular classification

Diseases associated with an M-protein included in this presentation are:

Asymptomatic plasma cell neoplasia with minimal evidence of disease aside from the presence of an M-protein (monoclonal gammopathy of undetermined significance, or MGUS)
Symptomatic plasma cell neoplasia
a. Primarily affecting bones
Multiple myeloma 94%
Solitary plasmacytoma 3%
b. Extramedullary plasmacytoma 3%
These usually occur in the nasopharynx, tonsils and paranasal sinuses.
Macroglobulinemia. Patients usually have lymphadenopathy and splenomegaly; < 10% have lytic bone lesions.
Asymptomatic
Symptomatic

Principles of treatment

STAGE I MULTIPLE MYELOMA
Stage I multiple myeloma can be an indolent disease. The median survival is at least 40–46 months. Treatment should be instituted only when evidence of disease progression is apparent.

Asymptomatic patients
Standard: Careful monitoring for evidence of disease progression without immediate chemotherapy is preferred. Monitoring includes serial evaluation of serum levels of calcium and creatinine, skeletal x-rays, hematologic parameters, and the level of M-protein in serum and urine.

Symptomatic patients
Standard: Symptoms or complications require systemic treatment either with a single alkylating agent such as melphalan, sometimes combined with prednisone, or with combination chemotherapy as described for stages II and III. In all patients with multiple myeloma, radiation therapy is used to treat localized symptomatic bone lesions or large lesions of weight-bearing bones or the spine that are not controlled by chemotherapy. Field size should be kept to the minimum required to control symptoms in order to avoid compromising the bone marrow reserve.

Investigational: Numerous studies are in progress investigating new multidrug treatment programs compared with standard drug treatment. Therapy with "biologic response modifiers," including interferons, is also under investigation. Newly diagnosed patients with progressing disease should be considered candidates for clinical trials.

STAGE II MULTIPLE MYELOMA
Chemotherapy prolongs the life of patients with symptomatic multiple myeloma from a median of 7 to 24–30 months and longer in some cases. Median survivals are 25–40 months for stage II and 17–25 months for stage III.

Treatment options
Standard: Chemotherapy regimens producing similar results are:
1. Melphalan
2. Melphalan and prednisone (MP)
3. Melphalan, cyclophosphamide, carmustine, prednisone (MCBP)
4. Cyclophosphamide, prednisone, semustine (CPMeCC)
5. Melphalan, doxorubicin, prednisone (MAP); melphalan, cyclophosphamide, prednisone (MCP); vincristine, cyclophosphamide, doxorubicin, prednisone (VBAP)
6. Melphalan, cyclophosphamide, carmustine, prednisone, vincristine [MCBPV (M2)]
7. Carmustine, cyclophosphamide, prednisone (BCP)
8. Vincristine, melphalan, cyclophosphamide, prednisone alternating with vincristine, carmustine, doxorubicin, prednisone (VMCP/VBAP)
9. Vincristine, melphalan, cyclophosphamide, prednisone alternating with vincristine, cyclophosphamide, doxorubicin, prednisone (VMCP/VCAP)

There is no evidence that any one alkylating agent is superior to any other. All standard doses and schedules produce equivalent results. Intermittent oral melphalan is less toxic than daily oral doses. Combinations of alkylating agents, given simultaneously or in alternation, have not proven to be superior to therapy with a single alkylating agent (with or without prednisone) given until the disease progresses. Drug combinations using alkylating agents with other drugs (vincristine with or without doxorubicin) appeared to be superior to an alkylating agent plus prednisone in a recent large clinical trial. Other multi-agent studies have not demonstrated superiority to alkylating agents alone, however, and additional trials are in progress. In patients who have complete or very good responses, treatment can be stopped after one to two years if patients are followed closely and if chemotherapy is reinstituted promptly when the disease progresses. This is particularly true for patients with an excellent response or low tumor burden. Radiation therapy can be used to treat localized symptomatic bone lesions or large lesions of weight-bearing bones or the spine that are not controlled by chemotherapy. Field size should be kept to the minimum required to control symptoms in order to avoid compromising the bone marrow.

Investigational: Numerous studies are in progress investigating new multidrug treatment programs compared with standard drug treatment. Therapy with "biologic response modifiers," including interferon, is also under investigation. Newly diagnosed patients with progressing disease should be considered for candidate clinical trials.

STAGE III MULTIPLE MYELOMA
Chemotherapy prolongs the life of patients with symptomatic multiple myeloma from a median of 7 to 24–30 months and longer in some cases. Median survivals are 25–40 months for stage II and 17–25 months for stage III.

ISOLATED PLASMACYTOMA OF BONE
If a solitary lytic lesion of plasma cells is found on skeletal survey in an otherwise asymptomatic patient and a bone marrow examination from an uninvolved site contains less than 5% plasma cells, the patient has an isolated plasmacytoma of bone. The survival of patients with isolated plasmacytoma of bone is 50% at ten years, which is much better than the survival of patients with disseminated disease who require chemotherapy; half will have done so by two years from diagnosis.

Treatment options
Standard: Irradiation to the lesion is standard treatment. If the M-protein persists or reappears and the patient is symptomatic, chemotherapy is required.

EXTRAMEDULLARY PLASMACYTOMA
Patients with isolated plasma cell tumors of soft tissues, most commonly occurring in the tonsils, nasopharynx, or paranasal sinuses, should have skeletal x-rays and bone marrow biopsy. If these tests are negative, the patient has extramedullary plasmacytoma. Seventy percent of patients appear curable. The median survival is 15 years. The remaining patients will develop disseminated myeloma.

Treatment options
Standard: Radiation therapy to the isolated lesion is standard treatment. In rare cases, surgical removal may be used alone but is best followed by radiation therapy. If the M-protein persists or reappears and the patient is symptomatic, chemotherapy is required.

MACROGLOBULINEMIA
The guidelines for the treatment of patients with macroglobulinemia are similar to those for multiple myeloma. Be-

cause macroglobulins are large proteins which are confined to the intravascular space, patients must be observed for the occurrence of hyperviscosity syndrome. There is no staging system in general use. The approach to chemotherapy is similar to that for multiple myeloma. The median survival of patients with macroglobulinemia may be longer (that is, more than 36 months) than for multiple myeloma.

Treatment options
Standard: Careful monitoring for evidence of disease progression without immediate chemotherapy in asymptomatic patients is standard treatment. In symptomatic patients, standard treatment is daily oral chlorambucil. Standard treatment for hyperviscosity syndrome is plasmapheresis.
Investigational: Investigational protocols include regimens such as melphalan, cyclophosphamide, carmustine, prednisone, vincristine [MCBPV (M2)].

MONOCLONAL GAMMOPATHY OF UNDETERMINED SIGNIFICANCE
Patients with monoclonal gammopathy of undetermined significance have an M-protein in the serum without symptoms or findings of multiple myeloma, macroglobulinemia, amyloidosis, or lymphoma, and with fewer than 10% plasma cells in the bone marrow. Multiple myeloma, other plasma cell dyscrasia, or lymphoma will develop in 5% of patients by five years, 15% by 10 years, and 30% by 15 years. Unfortunately, patients who will eventually develop plasma cell malignancy or lymphoma cannot be identified on the basis of level of M-protein, peripheral blood count, type of monoclonal immunoglobulin, percentage of plasma cells in the bone marrow, or levels of normal immunoglobulins. Therefore, all patients with monoclonal gammopathy of undetermined significance must be kept under observation to detect increases in M-protein levels and development of one of the above malignancies.

Treatment options
Standard: Periodic monitoring of M-protein levels with observation for development of signs or symptoms of plasma cell malignancy or lymphoma is standard treatment.

RECURRENT PLASMA CELL NEOPLASM
The prognosis for any treated cancer patient with progressing, recurring or relapsing disease is poor, regardless of cell type or stage. The question and selection of further treatment depends on many factors, including the specific cancer, prior treatment, site of recurrence, as well as individual patient considerations. Investigational treatments are appropriate and should be considered when possible.

Resources
A physician, well-qualified in the use of chemotherapeutic agents, should select and supervise the chemotherapy regimen.

Radiation therapy capability is frequently necessary to treat areas of bone pain or neurologic compression syndrome.

Blood bank support to include red cell units and platelet units is essential.

Occasionally, renal dialysis is indicated.

Rarely, plasmapheresis of cases with high M-protein levels is indicated.

CHRONIC LYMPHOCYTIC LEUKEMIA

Introduction
Chronic lymphocytic leukemia (CLL) is a malignancy of monoclonal, small- to medium-size B-lymphocytes resulting in the proliferation and accumulation of these cells in the peripheral blood, bone marrow, lymph nodes, spleen, and liver. Uncommon variants of CLL include T-cell CLL, prolymphocytic leukemia, and hairy cell leukemia. This section will be entirely devoted to the common B-cell variety of CLL.

Epidemiology and etiology
CLL accounts for approximately 25% of all forms of leukemia and is the most common leukemia in the elderly. CLL is about twice as common as chronic myelocytic leukemia and has an incidence of approximately 3 per 1,000 population. More than 90% of patients with CLL are over 50 years of age. CLL is observed in men and women with approximately equal frequency but is more common in white and black populations than in oriental populations. Radiation, drugs, chemical exposure, and viruses have not been implicated as factors in the etiology or pathogenesis of CLL. There is a familial tendency for CLL, and often there is a history of a lymphoma or multiple myeloma in family members of patients with CLL. Furthermore, there is a slightly increased incidence of secondary nonhematological malignancies in patients with CLL, most notably carcinoma of the skin, lung, and colon.

Detection and diagnosis

CLINICAL CHARACTERISTICS
Usually it is very easy to identify CLL, since a blood count with a leukocytosis and a predominance of mature lymphocytes will ordinarily alert a physician to the diagnosis. Often patients with early CLL will be unaware of having any abnormalities, and the blood count typical of CLL may be detected incidentally when patients seek medical assistance for unrelated problems. In the initial stage of CLL, a leukocytosis and a predominance of lymphocytes in the peripheral blood may be the only manifestations of the disease. In later stages of CLL, there may appear enlarged lymph nodes, splenomegaly, and hepatomegaly. For some patients with CLL, enlarged lymph nodes may be the reason for seeking medical assistance. Thus, a collar of greatly swollen lymph nodes may encircle the neck and prevent fastening the top button of a shirt or blouse. In some patients with CLL, a greatly enlarged spleen may be painful, or the patient may be aware of a left upper quadrant mass. An enlarged spleen may press on the stomach and produce a feeling of early satiety or easily "filling up" during meals. In patients with more advanced disease, there may be symptoms of anemia, bleeding, and an increased incidence of bacterial infections, especially pneumonia.

LABORATORY CHARACTERISTICS

A sustained and absolute lymphocytosis in the peripheral blood with mature-appearing lymphocytes, not due to other demonstrable causes, typifies CLL. An absolute lymphocytosis (total leukocyte count times percentage lymphocytes) of 15,000/μL or more is the usual laboratory value considered diagnostic of CLL. In reality, however, an absolute lymphocytosis is a count greater than 5,000/μL. In extreme cases, the total leukocyte count in CLL may climb to 300,000/μL with over 90% of the cells mature-appearing lymphocytes.

The lymphoid cells in both the peripheral blood and bone marrow of patients with CLL are typically small and mature in appearance. Occasionally, larger, more immature cells may be observed. The bone marrow in CLL typically exhibits normal or increased cellularity with more than 40% of the cells lymphocytes. In some patients with CLL, especially those with exceedingly high total leukocyte counts, it may be impossible to aspirate bone marrow because of extreme cellular packing. Involvement of the bone marrow in CLL consists of large numbers of lymphocytes varying from areas of focal infiltration to massive replacement of the marrow by large sheets or great clumps of cells. More immature lymphocytes may also appear in the bone marrow of patients with CLL. Examination of the bone marrow, however, is not absolutely essential to diagnosis of CLL.

In approximately 20% of patients with CLL, a positive direct antiglobulin test (Coombs test) may be observed. About 10% of patients with CLL have a secondary autoimmune hemolytic anemia (AIHA) characterized by anemia, spherocytic erythrocytes on examination of a peripheral blood smear, a reticulocytosis, and a positive direct Coombs test. In these patients, examination of the bone marrow reveals erythroid hyperplasia. In approximately 3%-5% of patients with CLL, there is also thrombocytopenia due to autoantibodies. In this latter group of patients, examination of the bone marrow should reveal normal to increased quantities of megakaryocytes. Although autoimmune hemolytic anemia and/or thrombocytopenia may be observed in patients with CLL, the most common cause of anemia and thrombocytopenia is reduced bone marrow production of red cells and platelets from lymphoid proliferation. In approximately 50% of patients with CLL there are various degrees of hypogammaglobulinemia, and 10% will have an IgM monoclonal gammopathy.

Classification

The most common system for classifying or staging CLL includes the following:

- Stage 0: An absolute lymphocytosis (over 15,000 lymphocytes/μL) in the peripheral blood
- Stage I: An absolute lymphocytosis plus enlarged, palpable lymph nodes
- Stage II: An absolute lymphocytosis plus an enlarged spleen and/or liver
- Stage III: An absolute lymphocytosis plus anemia, defined as a hemoglobin concentration below 11 g/dL blood
- Stage IV: An absolute lymphocytosis plus thrombocytopenia, defined as a platelet count less than 100,000/μL blood

Principles of treatment

A diagnosis of CLL is not a mandate to immediately begin therapy with cytotoxic drugs. For many patients with CLL, particularly those in whom the diagnosis is made incidentally or in the course of an examination for other reasons, no immediate therapy may be indicated. Indeed, for most patients with CLL, it is wise to observe the patient for a period of weeks or months to determine the clinical behavior of the disease before instituting treatment with cytotoxic drugs. It is an unusual patient with CLL that requires immediate treatment when the diagnosis is established. There are some patients with CLL, however, who are extremely ill when they are initially examined and have excessively high leukocyte counts (greater than 200,000/μL). In these patients, it may be necessary to begin therapy immediately. Some indications for instituting chemotherapy in patients with CLL are:

- Increasing symptoms due to progressive disease. These may include unexplained weight loss, fever, easy fatigue, pain, and skin rash.
- Worsening anemia and/or thrombocytopenia due to progressive lymphocytic infiltration of the bone marrow.
- Autoimmune hemolytic anemia and/or thrombocytopenia.
- A massively enlarged spleen causing pain or other symptoms by pressing on abdominal structures.
- Massive enlargement of lymph nodes causing symptoms due to "bulky disease."
- Increasing susceptibility to bacterial infections.

Treatment of CLL with cytotoxic medications is unnecessary for patients with stage 0 and usually in asymptomatic patients with stages I and II disease. For those patients with stages I and II disease who exhibit symptoms of CLL, the recommended treatment is chlorambucil (0.1–0.2 mg/kg/day). For patients with stage III or stage IV disease, chlorambucil by itself or in combination with prednisone (30–60 mg/M^2/day) is recommended. Therapy with prednisone is also indicated for those patients with CLL who have autoimmune hemolytic anemia and/or thrombocytopenia. Other chemotherapeutic agents that may prove effective in selected patients with CLL include cyclophosphamide (2–3 mg/kg/day) with or without prednisone or a combination of cyclophosphamide, vincristine, and prednisone. Also in selected patients, radiation may be helpful to reduce the size of lymph nodes compromising an organ function or to reduce the size of a greatly enlarged and painful splenomegaly. Splenectomy rarely has a place in the treatment of CLL but may be helpful in the management of autoimmune hemolytic anemia or thrombocytopenia.

Results and prognosis

The aims of therapy include: relief of symptoms; reduction of the size of lymph nodes, spleen and liver; reduction of the incidence of infections; improvement in the hemoglobin concentration and platelet count; and lowering of the leukocyte count to an acceptable value (<25,000/μL).

A complete hematological remission in CLL almost never occurs, but with careful therapy, patients may have prolonged periods when they are free of symptoms and clinically well. Although CLL does reduce a patient's life expectancy, therapy

can effectively prolong survival time. The median survival in CLL, however, is determined by the stage of the disease at the time of diagnosis. Patients with stage 0 disease can expect a median survival of 150 months, whereas those with stage IV can expect a median survival of 20 months. The average median survival for all patients with CLL is nearly six years.

HODGKIN'S DISEASE

Introduction

Hodgkin's disease, until 15–20 years ago, was fatal in a high proportion of patients. With the advent of sophisticated radiotherapeutic techniques utilizing high-energy photon beams, this disease now carries an overall cure rate of approximately 65%. This fact demands that the patient with a diagnosis of Hodgkin's disease be managed by a team of expert physicians in radiation therapy, surgery, and medical oncology.

Epidemiology and etiology

The etiology of Hodgkin's disease remains unknown. Every year, approximately 7,200 people in the United States develop Hodgkin's disease. The age-specific incidence is bi-modal with peaks in the second and third decades and over the age of 60; Hodgkin's disease is a disease of young adults, which renders its adequate treatment crucial to productive life.

Detection and diagnosis

In the large majority of individuals, Hodgkin's disease presents as lymph node enlargement. In the absence of a clear source of infectious origin, a high degree of suspicion must be present in the physician examining young people with unexplained lymphadenopathy.

A detailed history and complete physical examination are crucial as an initial step. In the history, weight loss of unexplained origin of greater than 10% of body weight, fever, and drenching night sweats are important clues. The physical examination should include a careful examination of the head and neck area and examination of all lymph-node-bearing regions of the body; presence or absence of splenomegaly is an important physical finding. In the absence of clear evidence of an infectious origin of lymphadenopathy, a biopsy of enlarged lymph nodes is crucial to the diagnosis.

Laboratory studies should include liver function tests, routine blood chemistries, and a complete blood count including a sedimentation rate. The latter is often elevated in patients with Hodgkin's disease. A chest x-ray is mandatory.

Once a diagnosis of Hodgkin's disease is established, the following diagnostic procedures are *mandatory*:

Lymphangiogram
Intravenous urogram
Bone marrow biopsy

The following procedures are *optional*:

CT scan of the abdomen
CT scan of the chest if parynchymal disease is suspected
Bone scan
Liver/spleen scan in patients with abnormal liver function tests

Classification and staging

The staging of Hodgkin's disease is based on the Ann Arbor stage classification and is summarized in Fig 2.

The absence or presence of fever, night sweats, and/or unexplained loss of 10% or more of body weight in the six months preceding admission are to be noted in all cases by the suffix letters A or B, respectively.

The histopathology of Hodgkin's disease consists of:

Mixed cellularity
Lymphocyte predominant
Nodular sclerosing
Lymphocyte depleted

This histopathological classification depends upon the review of biopsy material by an experienced pathologist expert in the histopathology of lymphomas.

The staging work-up for patients with biopsy-proven Hodgkin's disease should include a staging laparotomy if the results will impact upon therapeutic strategies. If performed, the staging laparotomy should include a splenectomy, wedge and needle biopsies of the liver, sampling of suspicious paraaortic nodes as indicated by the lymphangiogram, and radiopaque clips at the splenic pedicle. In women of child-bearing age, one or both ovaries should be moved to the midline. The purpose of this procedure is to insure fertility if pelvic irradiation is to be included in the treatment volume.

Principles of treatment

The successful treatment of Hodgkin's disease requires the close cooperation between physicians in radiation therapy, surgery, and medical oncology. Following diagnosis, all three groups should establish diagnostic and therapeutic approaches rapidly. All three physicians must have the opportunity to evaluate patients with suspected Hodgkin's disease prior to any surgical procedure, including biopsy.

Children present special considerations in the treatment of Hodgkin's disease and should be managed by a team of physicians including a radiation therapist with a special interest in pediatric radiation therapy, and a pediatric oncologist.

The treatment of stages I and II (A and B) is, except in rare instances, exclusively with radiation therapy. Patients with stages III and IV should be treated with combined modality

2. Ann Arbor staging classification for Hodgkin's disease.

Stage	Definition
I	Involvement of a single lymph node region (I) or of a single extralymphatic organ or site (I_e)
II	Involvement of two or more lymph node regions on the same side of the diaphragm (II) or localized involvement of an extralymphatic organ or site and of one or more lymph node regions on the same side of the diaphragm (II_e)
III	Involvement of lymph node regions on both sides of the diaphragm (III), which may also be accompanied by involvement of the spleen (III_s) or by localized involvement of an extralymphatic organ or site (III_e) or both (III_{se})
IV	Diffuse or disseminated involvement of one or more extralymphatic organs or tissues, with or without associated lymph node involvement

treatment including radiation and appropriate multi-drug chemotherapy.

Facilities providing radiation therapy of patients with Hodgkin's disease should have megavoltage linear accelerators, simulators, capability for precise blocking techniques to avoid the irradiation of important normal structures, full-time physics and dosimetric support, and a radiotherapeutic staff which understands the natural history of this disease.

Likewise, the chemotherapeutic management of this disease must be undertaken by medical oncologists who are comfortable with the administration of toxic drugs and who understand the importance of "time-dose" considerations in chemotherapeutic management. The chemotherapy of Hodgkin's disease is classically accomplished with nitrogen mustard, Oncovin, procarbazine, and prednisone (MOPP). More recent information indicates that the use of Adriamycin, bleomycin, vincristine, and dacarbazine (ABVD) is also effective in this disease.

In those individuals for whom radiation therapy fails, chemotherapeutic salvage is accompanied by significant success. However, radiotherapeutic salvage of chemotherapeutic failure is less impressive. Therefore, failures of chemotherapy should be approached with alternative chemotherapeutic combinations. These alternative combinations should be determined by appropriate medical oncology expertise. Following treatment, patients with Hodgkin's disease must be followed by the radiation therapist and medical oncologist of record. In addition to routine follow-up procedures including blood counts and blood chemistries, a chest x-ray every three months for the first year must be done; and in those patients who have had a lymphangiogram, a plain film of the abdomen (KUB) is useful in evaluating residual lymphangiography dye in para-aortic and pelvic lymph nodes.

Several investigational treatment options are available for patients with advanced disease and/or recurrent disease. These include experimental chemotherapeutic combinations which must be managed at institutions participating in such experimental protocols.

Results and prognosis

The five- and ten-year disease-free survival by stage is given in Fig 3.

The patterns of failure in Hodgkin's disease are predominantly in bone marrow, bone, lung, liver, skin, and central nervous system.

3. Disease-free survival for Hodgkin's disease.

Stage	Therapy	5 years	10 years
IA	Radiation	90+%	90+%
IB	Radiation	90+%	90+%
IIA	Radiation	65–70%	75–90% *
IIB	Radiation	65–70%	75–90% *
IIIA	CMT *	50–65%	50–65% *
IIIB	CMT *	50–65%	50–65% †
IV A and B	CMT *	40–65%	50–65% †

* Combined Modality Treatment (radiation and chemotherapy)
† Includes patients successfully salvaged

Failure may also occur in areas of original gross disease within the irradiated volume. For this reason, grossly involved nodes should receive "boost" irradiation. In the case of large mediastinal and/or hilar disease, combined modality treatment offers the best chance for local control.

CHRONIC GRANULOCYTIC LEUKEMIA

Introduction

Chronic granulocytic leukemia (CGL or chronic myelogenous leukemia, CML) is grouped among the myeloproliferative disorders which include polycythemia vera, essential thrombocytosis, agnogenic myeloid metaplasia, and acute nonlymphoblastic leukemia.

Epidemiology and etiology

CGL is an uncommon malignancy, accounting for about 20% of all leukemias and a death rate of about one per 100,000 per year. The median age at diagnosis is 40–45 years. The etiology of CGL is unknown. An increased incidence is associated with exposure to ionizing radiation.

Detection and diagnosis

The patient with CGL presents with symptoms related to anemia, splenomegaly and/or bleeding. Rarely, symptoms include the consequences of a marked leukocytosis (priapism, increased intracranial pressure, pulmonary insufficiency) or bony discomfort.

The laboratory evaluation of CGL demonstrates the following:

- Variable degree of anemia
- Neutrophilic leukocytosis (50,000 to 250,000/dL) with immaturity
- Low leukocyte alkaline phosphatase score
- Normal to increased platelet count
- Bone marrow hypercellularity involving the neutrophilic series with minimal disturbance in maturation (blasts < 5%)
- The Philadelphia chromosome (Ph^1) is present in the peripheral blood and/or bone marrow in greater than 90% of the cases

Classification

CGL is divided clinically, prognostically, and therapeutically into the following phases of the disease:

Phase	Clinical Findings
Chronic	As noted above
Accelerated	Fever, malaise, increasing splenomegaly, increasing blasts in bone marrow (5%–30%)
Blastic	Fever, malaise, increasing splenomegaly, bone marrow blasts > 30%

Treatment

Current therapy of CGL does not result in cure, delay in the development of blastic transformation, nor prolongation of the

average duration of survival. The need for improved therapy is obvious. Therefore, all newly diagnosed patients should be seriously considered for investigational protocols, eg, bone marrow transplantation, biologic response modifiers and combination chemotherapy.

Therapy of CGL is administered in an attempt to normalize the peripheral blood counts and palliate symptoms. Occasionally, leukapheresis is necessary to control extreme, symptomatic leukocytosis.

Phase	Treatment Options
Chronic	None if counts near normal
	Busulfan (Myleran)
	Hydroxyurea
	Bone marrow transplantation
	Other investigational approaches
Accelerated	Symptom palliation
	Investigational approaches
Blastic	Symptom palliation
	Investigational approaches

Results and prognosis

The following table emphasizes again the need for continuing investigational approaches:

Phase	Median Survival
Chronic	$Ph^1(+) = 3.5$ years
	$Ph^1(-) = 1.5$ years
Accelerated	< 1 year
Blastic	< 6 months

Lung cancer

Lung Oncology Workgroup
William J. deGroot, MD, Chairman
John C. Bagwell, MD; Patricia A. Buffler, PhD; Claude Y. Chong, MD; Charles R. Denham, MD; Stanton P. Fischer, MD; William Gordon, Jr, MD; Frederick L. Grover, MD; John M. Lukeman, MD; Clifton F. Mountain, MD; Ted M. Nicklaus, MD; H. Irving Schweppe, Jr, MD; C. Porter Storey, Jr, MD; Geoffrey R. Weiss, MD

Contents

72 INTRODUCTION
72 INCIDENCE AND PATHOLOGY
72 EPIDEMIOLOGY AND ETIOLOGY
73 DETECTION AND DIAGNOSIS
74 CLASSIFICATION AND STAGING
76 SURGICAL TREATMENT
77 BRACHYTHERAPY AND LASER THERAPY
77 RADIOTHERAPY OF BRONCHOGENIC CARCINOMAS
78 MEDICAL ONCOLOGY
79 RESULTS AND PROGNOSIS
80 SELECTED REFERENCES

INTRODUCTION

Within the past 50 years, the bronchogenic carcinomas have become one of the major medical problems of the 20th century in all developed and some underdeveloped countries. In the United States, primary lung cancers now constitute the second most common cause of death in men and the third or fourth most common cause of death in women (Fig 1). While it is not a disease of children, neither is it a disease exclusively of the elderly. Mortality for both men and women starts to peak around age 35 and remains high into the eighth decade. It is a disease of enormous lethality, with only a few fortunate patients surviving more than two years after diagnosis, even with the most advanced treatment. The high mortality stems not only from the aggressive nature of the tumors, but also from the difficulty in establishing an early diagnosis. While attempts to improve early diagnosis through screening have not been rewarding, a broader awareness of the subtle and deceptive manifestations of the disease, as well as a wider use of the more discerning diagnostic techniques currently available, may salvage a few more people.

The basic underlying mechanism which triggers the mutation of a normal lung cell to uncontrolled malignant replication is not known. Whether virus-induced altered DNA transcription is a factor is entirely speculative. However, it is absolutely clear that the use of tobacco products, especially smoking cigarettes, is directly and causatively related to the development of most bronchogenic carcinomas, thus making it an almost totally preventable disease. This fact has been known and generally accepted by most health professionals since the first Surgeon General's report in 1964; yet rejection of tobacco use by the general population has been alarmingly sluggish. The lack of public concern reflects the general apathy toward or disbelief in the problem. This lack of concern is surprising when one considers the enormous and ever-increasing consumption of private and public funds for the nearly futile treatment of patients with the disease.

INCIDENCE AND PATHOLOGY

Although the incidence of lung cancer varies with geographic location, it is a common problem throughout Texas and the United States. In men, the incidence has steadily increased since shortly after the first World War, from an attack rate of five per 100,000 in 1930, to more than 72 per 100,000 in 1983. There is hopeful speculation that the attack rate for men has reached a plateau. In women, lung cancer was a rare disease until some 15 years after the second World War, during which time women in large numbers developed the tobacco habit; this time span reflects the generally accepted latency period for lung cancer. Since the early 1960s, lung cancer has been an increasingly important cause of death in women.

While most of the common lung cancers are etiologically coupled to cigarette use, they do not comprise a single or uniform disease. Many of the behavioral characteristics of these tumors seem to be determined by their histology. Since therapy is predicated upon precise cell identification, response to therapy can be determined only when classification of lung tumors is standardized. Fig 2 is a list of lung neoplasms classified by international (World Health Organization) agreement. Only those identified with an asterisk are the subject of this review. As many as 30% of lung tumors defy accurate classification; these are chiefly the poorly differentiated carcinomas. In addition, there are a sizable number of tumors composed of more than one cell type, suggesting biclonal or multiclonal origin. These multiclonal or mixed cell tumors represent a therapeutic dilemma, whose solution is pragmatic. In such cases, the dominant cell type or the cell type with the most favorable prognosis determines the management plan.

EPIDEMIOLOGY AND ETIOLOGY

Lung cancer represents the only major malignancy for which mortality has not declined or remained stable in recent years. Age-adjusted lung cancer mortality rates among men have increased from 4.9 per 100,000 in 1930 to 71.6 per 100,000 in 1980, and among women from 2.2 per 100,000 to 20.9 per 100,000 during the same time interval. The rate of increase is currently decelerating in men and accelerating in women. The actual lung cancer death rates are decreasing in white men under 55 years of age and in black men under 45 years of age. Average annual age-adjusted incidence rates during 1978–1981 were 81 per 100,000 white males, 119 per 100,000 black males, 28 per 100,000 white females and 31 per 100,000 black females. The American Cancer Society estimated that in 1986 there would be 149,000 new cases of lung cancer in the United States, 100,000 men and 49,000 women; and 130,000 deaths, 89,000 men and 41,000 women. Lung cancer would then account for 16% of all cancer cases (21% in males and 11% in females) in 1986. Because of the low survival rates

(relative five-year survival less than 15%), this malignancy would account for 28% of all cancer deaths (35% in males and 19% in females).

Smoking is clearly the predominant risk factor for lung cancer; it is estimated to account for 85% to 90% of lung cancers among men and more than 75% among women. Occupational exposures also play an important role in lung cancer etiology, though to a far lesser degree. It is estimated that occupational exposures contribute to 25% of lung cancers in men and 5% in women. Lung cancer is associated with occupational exposure to arsenic, asbestos, chloroethers, chromium, ionizing radiation, mustard gas, nickel, and polynuclear aromatic hydrocarbons. Although their role is not clear, nutritional status (low vitamin A), passive smoking, and possibly air pollution are suspected to play a role in the etiology of lung cancer. The causes of lung cancer are not independent, as evidenced by the greatly enhanced effect produced by the combination of occupational carcinogens and tobacco smoke. Therefore, when partitioning the etiology of lung cancer into separate causes, the proportions attributed to each cause cannot be simply added.

Geographic variation and Texas-specific data

Geographic variations in cancer mortality have provided clues to risk factors. In the United States, the highest rates for lung cancer have clustered in the South, particularly in the counties along the Atlantic and Gulf Coasts, including the Texas Gulf Coast. Lung cancer mortality rates in some Texas coastal counties have been among the highest in the nation. Using 1970–1975 mortality data, the excess lung cancer mortality along the Texas Gulf Coast was approximately 30%–40%. In 1986, the American Cancer Society estimated that there would be 8,000 new cases of lung cancer and 7,000 lung cancer deaths in Texas. Lung cancer would then account for 16% of all cancer cases and 29% of all cancer deaths in Texas.

DETECTION AND DIAGNOSIS

As with any diagnosis in clinical medicine, a knowledge of the population at particular risk and an acute awareness of the varying clinical presentations of the disease are essential to timely detection of lung cancer.

It has long been known that cigarette-smoking men are the principal candidates for lung cancer. It is now apparent that cigarette-smoking women are following in the footsteps of their male counterparts. The majority of patients with lung cancer will come from the older segment of this population. Many of the remaining patients will be younger smokers or will have had exposure to industrial or environmental carcinogens, including passive tobacco smoke. Because environmental carcinogens are so difficult to identify or are so ubiquitous, patients at risk for these reasons cannot be easily recognized.

Symptoms

Incidental abnormalities on chest x-ray occasionally detect lung cancer in asymptomatic subjects. However, it is the appearance of a symptom or constellation of symptoms which usually triggers the suspicion of this tumor. While the presence

1. 1983 United States mortality—five leading causes of death.

Men: All Causes 1,071,923	Women: All Causes 947,278
1. Heart disease 402,697	Heart disease 367,648
2. Lung cancer 80,338	Cardiovascular disease 92,751
3. Accidents 63,902	Breast cancer 37,979
4. Cardiovascular disease 62,847	Lung cancer 34,685
5. Chronic obstructive lung disease 30,322	Accidents 28,586

2. Classification of epithelial tumors.

1. Dysplasias
*2. Carcinoma in situ
*3. Squamous carcinoma
   a. Well, moderately and poorly differentiated
   b. Spindle variant of poorly differentiated squamous
*4. Small cell carcinoma
* a. "Oat" cell
* b. Intermediate
* c. Mixed or combined
*5. Adenocarcinoma
* a. Well differentiated (acinar), moderately and poorly differentiated
   b. Bronchioalveolar
*6. Large cell (anaplastic) carcinoma
* a. Giant cell variant
* b. Clear cell carcinoma
*7. Bi- or multicomponent tumor
* a. Adenosquamous
   b. Adeno-small "oat" cell
8. Carcinoid
   a. Characteristic
   b. Atypical (malignant)
9. Bronchial gland tumors
   a. Adenoid cystic carcinoma
   b. Mucoepidermoid carcinoma
   c. Mixed tumor
   d. Other
10. Miscellaneous
   a. Lymphoma
   b. Melanoma
   c. Pulmonary blastoma
   d. Carcinosarcoma
11. Sarcoma
   a. Leiomyo, fibro, neuro, etc
12. Unclassified
13. Mesothelial tumors
   a. Benign (localized)
   b. Malignant (diffuse)
      1. Epithelial
      2. Sarcomatous
      3. Biphasic
14. Metastatic tumors

3. Critical symptoms in lung cancer.

Early Symptoms	Late Symptoms
Change in cough	Change in headache
Change in sputum	Hoarseness
Hemoptysis	Change in mentation
Change in dyspnea	Seizures
Chest pain	Bone pain

4. Critical signs in lung cancer.

Early Signs	Late Signs
Local or changed wheeze	Unilateral decreased diaphragmatic motion
Inspiratory stridor	Unilateral chest dullness
Digital clubbing	Unilateral absent breath sounds
Local decreased breath sounds	Hard supraclavicular adenopathy
Local bronchial breath sounds	Hard axillary adenopathy
Tracheal and/or heart shift	Hard nodular liver
	Violaceous facial edema

of a new symptom (usually but not always respiratory) in a smoker or ex-smoker should be considered a clue to something more ominous, the same symptoms in a non-smoker can also be the signal of lung cancer. Often, at least in the smoker, the symptom is not a new one but a change in the character or intensity of an old one. The chronic early-morning smoker's cough now lasts throughout the day; sputum production increases and becomes purulent or tinged with blood, or there is frank hemoptysis; dyspnea with moderate exertion becomes dyspnea with slight exertion or no exertion at all. These respiratory symptoms result from airway narrowing or from invasion of vital mediastinal structures. When the airway is partially obstructed, clearance of secretions is impaired, resulting in an infection distal to the lesion. Pneumonia in a middle-aged or elderly smoker should always be viewed with suspicion. Complete bronchial obstruction commonly results in segmental or lobar atelectasis.

Increased dyspnea can also be a manifestation of mediastinal or pleural involvement. Phrenic nerve entrapment causes paralysis of the hemidiaphragm, thus impairing respiratory function. Recurrent laryngeal nerve involvement causes hoarseness as well as dyspnea. Pleural effusion displaces the ipsilateral lung and may shift the mediastinum, thus reducing ventilatory capacity of the uninvolved as well as the involved side.

Distant metastases commonly involve bone, brain, or liver. Bone metastases cause pain, and brain metastases cause headaches or, less commonly, seizures. Metastasis to the liver is usually seen as a single defect or as multiple discrete lesions on radioisotope or CAT scans. While liver metastases often result in chemical abnormalities (elevated alkaline phosphatase), they rarely cause pain or other symptoms (Figs 3,4).

Diagnostic studies

The chest radiograph is the single most important diagnostic tool and should be obtained any time there is even remote suspicion that a patient's symptoms are the result of a bronchogenic carcinoma. While screening chest x-rays have not improved survival rates by the early detection of lung cancer, this should not discourage the use of radiographic examination in patients with respiratory symptoms. Indeed, minimal symptoms in a patient over 45 years of age and a significant smoking history should immediately prompt the request for a two-plane x-ray examination.

Of course, the x-ray will not establish the diagnosis of bronchogenic carcinoma. More often than not, the radiographic findings will demonstrate changes which mimic many other diseases of the chest (Fig 5). Diagnostic confirmation depends on retrieval of tissue or cellular material demonstrating malignant change. Cytologic assessment of spontaneous or induced sputum will confirm the diagnosis in most patients. In those patients in whom sputum examination is not rewarding, diagnosis can be made by bronchoscopy and biopsy; or, if a lesion is peripheral in location, by percutaneous needle aspiration biopsy. In a few patients, definitive tissue diagnosis cannot be established without some type of surgical intervention such as mediastinoscopy, mediastinotomy, or thoracotomy.

5. Radiographic clinical syndromes.

Mass lesion
Segmental or lobar atelectasis
Pneumonia/consolidation
Mediastinal shift
Diaphragmatic paralysis
Superior vena cava syndrome
Pleural effusion

CLASSIFICATION AND STAGING

The prognosis of patients with lung cancer is determined by the histopathology of the malignancy as well as the extent of the disease as assessed by staging.

Histopathology

Although four main histologic types of lung cancer are recognized (see section on Incidence and Pathology) from the viewpoint of native tumor behavior and response to treatment, the bronchogenic carcinomas have been divided into two groups, small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC). Small cell cancer grows rapidly and disseminates early. It is usually, but not always, considered inoperable at the time of diagnosis. However, it generally responds well to irradiation and chemotherapy. Non-small cell cancer, on the other hand, responds poorly to chemotherapy, has modest temporary response to irradiation, but has a better likelihood of responding to surgery.

TNM Classification

The staging of lung cancer by a TNM classification system has proved to be a critically useful tool in the assessment of treatment strategies. The separation of lung cancer patients into relatively homogeneous subgroups has permitted not only the critical comparison of various therapeutic strategies, but has also encouraged more aggressive intervention in some categories of patients.

TNM Definitions

PRIMARY TUMOR (T)

- TX Tumor proven by the presence of malignant cells in bronchopulmonary secretions but not visualized roentgenographically or bronchoscopically, or any tumor that cannot be assessed as in a retreatment staging.
- T0 No evidence of primary tumor.
- TIS Carcinoma *in situ*
- T1 A tumor that is 3.0 cm or less in greatest dimension, surrounded by lung or visceral pleura, and without evidence of invasion proximal to a lobar bronchus at bronchoscopy.
- T2 A tumor more than 3.0 cm in greatest dimension, or a tumor of any size that either invades the visceral pleura or has associated atelectasis or obstructive pneumonitis extending to the hilar region. At bronchoscopy, the proximal extent of demonstrable tumor must be within a lobar bronchus or at least 2.0 cm distal to the carina. Any

associated atelectasis or obstructive pneumonitis must involve less than an entire lung.

T3 A tumor of any size with direct extension into the chest wall (including superior sulcus tumors), diaphragm, or the mediastinal pleura or pericardium without involving the heart, great vessels, trachea, esophagus or vertebral body, or a tumor in the main bronchus within 2 cm of the carina without involving the carina.

T4 A tumor of any size with invasion of the mediastinum or involving heart, great vessels, trachea, esophagus, vertebral body or carina or presence of malignant pleural effusion.

NODAL INVOLVEMENT (N)

N0 No demonstrable metastasis to regional lymph nodes.

N1 Metastasis to lymph nodes in the peribronchial or the ipsilateral hilar region, or both, including direct extension.

N2 Metastasis to ipsilateral mediastinal lymph nodes and subcarinal lymph nodes.

N3 Metastasis to contralateral mediastinal lymph nodes, contralateral hilar lymph nodes, ipsilateral or contralateral scalene or supraclavicular lymph nodes.

DISTANT METASTASIS (M)

M0 No (known) distant metastasis

M1 Distant metastasis present—Specify site(s)

STAGE GROUPING OF TNM SUBSETS

Stage Grouping			
Occult Carcinoma	TX	N0	M0
Stage 0	TIS	Carcinoma in situ	
Stage I	T1	N0	M0
	T2	N0	M0
Stage II	T1	N1	M0
	T2	N1	M0
Stage IIIa	T3	N0	M0
	T3	N1	M0
	T1–3	N2	M0
Stage IIIb	Any T	N3	M0
	T4	Any N	M0
Stage IV	Any T	Any N	M1

For the practitioner who cares for lung cancer patients at irregular intervals, the TNM classification system can serve two important functions. First, prognostication, which can be vitally important to patients and their families, is much more precise in properly staged patients. Patients with moderate-sized local tumors without regional lymph node involvement (stage I—see Fig 6) have a 50% survival of nearly four years, while patients with similar-sized primary lesions but with ipsilateral hilar node involvement (stage II) have a 50% survival of less than two years.

Second, proper staging makes it possible to identify patients who are surgical candidates. Since surgery offers the only hope for cure and long-term survival, every lung cancer patient should be staged as early as possible. If accurate staging is unavailable at a local hospital, referral to a large center is imperative.

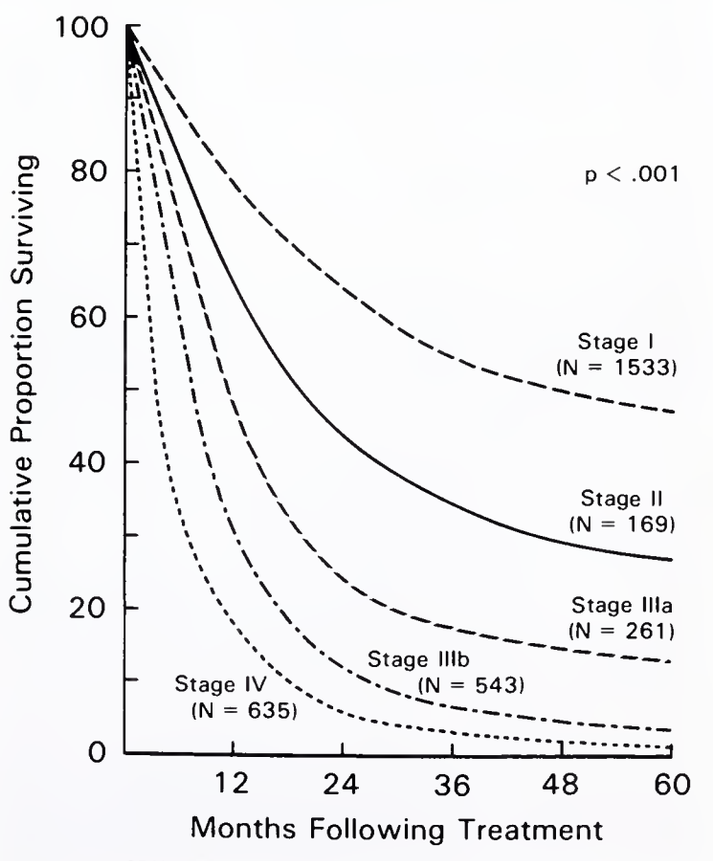
In Fig 6, stages I, II and IIIa represent the groups with potentially resectable cancer. Two points emerge vividly from the graphs: First, the number of patients with long-term survival is overwhelmingly dependent on the extent of disease at the time of diagnosis. Second, despite the overall poor prognosis of patients with stage IIIa disease (extensive disease but localized to one hemithorax), more than ten patients out of 100 will live five years and beyond if offered aggressive treatment.

Staging work-up

Because staging can involve a considerable expenditure of time, energy and money, the work-up should proceed in an orderly sequence from the remote sites of possible metastatic disease through the lesser degrees of involvement to the primary lesion.

When making an assessment for distant metastases, it is generally agreed that detailed laboratory and imaging studies are not indicated unless there is clinical evidence of a particular organ involvement. Thus, a repeat clinical assessment is suggested before confirmatory diagnostic studies are requested. Bone pain, headache, new neurologic deficit, mental status change, or personality alteration should suggest the need for bone or brain scan. Enlarged and/or nodular liver or an ele-

6. Cumulative proportion of patients surviving five years by clinical stage of disease. (From Mountain CF: A New International Staging System for Lung Cancer. Chest 89(4):2325, 1986. Reprinted with permission.)



vated alkaline phosphatase would prompt a liver scan and perhaps a liver biopsy. An enlarged supraclavicular or axillary lymph node would indicate the need for biopsy and histologic examination of these sites. If any of these areas demonstrate cancer, further staging should be restricted to that required for most effective radiotherapy.

If there is no evidence of metastatic involvement outside the chest, a detailed review of the intrathoracic disease is undertaken. Some clinical chest findings will preclude the necessity for detailed radiographic chest imaging. Hoarseness, superior vena cava syndrome, or an exudative pleural effusion all indicate major metastases and are signs of unresectability. Diaphragmatic paralysis, while indicating major mediastinal involvement, does not preclude surgical resection. Barring these manifestations, metastatic and/or lymphatic involvement of the contralateral lung, hilum and mediastinum must be determined. This is best done by computer-assisted tomography (CAT) scanning. Significant lesions within the lung (greater than 1.5 cm in diameter) should be biopsied. Lymph node enlargement is presumed cancerous unless transbronchial needle aspiration, mediastinoscopy, or thoracostomy fail to recover malignant cells. The CAT scan will also provide the best available localization of the primary tumor and any ipsilateral node involvement.

Radiographic imaging procedures are indispensable to the pretreatment assessment of all lung cancer patients. In the analysis of these images, however, it must be recognized that lymph node size is an imperfect predictor of malignant involvement. In patients with proven lung cancer, large intrathoracic lymph nodes are often benign while small nodes may contain extensive metastatic disease. Surgical sampling and histologic examination are essential for accurate definition.

SURGICAL TREATMENT

Staging

Patients should undergo clinical staging prior to definitive surgical treatment. This should include bronchoscopy to determine the extent of endobronchial involvement. If the tumor involves either an upper lobe bronchus or the main stem bronchi, the main carina should be biopsied. Involvement of the main carina with tumor usually implies unresectability. However, there are several reports of successful carinal resection in patients with small, well-localized carcinomas.

MEDIASTINAL LYMPH NODE STAGING

Patients should also have staging of their mediastinal lymph nodes. This may be done with or without the use of CT scanning. If CT scanning is used and there are no nodes greater than 1.0 cm in diameter, thoracotomy may be carried out, realizing that as many of 17% of patients will have tumor in their mediastinal nodes. Small nodes less than 1.0 cm in diameter are usually easily resectable. If there are nodes greater than 1 cm in diameter, a surgical mediastinal exploration should be performed. Patients with tumors of the right lung and left lower lobe should be approached through a cervical mediastinoscopy, and those with left upper lobe tumors via an anterior mediastinotomy. Some surgeons proceed with mediastinoscopy even in the presence of a CT scan with mediastinal lymph nodes less than 1 cm in diameter, because of the false negative rate of CT. No patient should be denied operative resection because of large lymph nodes on CT scanning or conventional radiographs without tissue confirmation, because there can be up to a 30% false positive rate on CT scanning.

Patients who have negative mediastinal nodes, no evidence of distant metastases, and no other contraindications to operation such as inadequate pulmonary function, should all be offered resectional surgery. Those who have contralateral mediastinal lymph node metastases should not undergo resection. Certain patients with ipsilateral mediastinal lymph node metastases may be candidates for resection. Ipsilateral lymph node metastases that are intranodal or small and without invasion of the adjacent mediastinum are usually resectable. Resection of the primary tumor and involved nodes can result in five-year actuarial survival rates of 9% if the positive nodes were found at mediastinoscopy, and 24% if mediastinoscopy was negative but positive nodes were discovered at thoracotomy. Postoperatively, these patients may be offered adjuvant irradiation, chemotherapy, or both, as investigational trials have suggested some benefit.

In one reported series, resection of patients with clinically evident mediastinal nodal disease resulted in a three-year survival of 16%, but those with bulky unresectable nodal disease survived an average of only nine months. Therefore, patients who have ipsilateral extranodal metastasis or bulky matted nodes usually are not candidates for resection unless they are eligible for entrance into a research protocol.

Evidence of invasion of the aorta or other major vascular structures by the primary tumor, malignant pleural effusion, and obstruction of the superior vena cava, are contraindications to surgical resection. Phrenic nerve involvement and chest wall invasion are not absolute contraindications to resection.

PULMONARY FUNCTION STUDIES

Pulmonary function studies should be performed prior to operation. The single most helpful pulmonary function test is the FEV^1. The average-sized adult patient should be left with an FEV^1 of at least 800 cc after operation. Lateral position tests, differential spirometry, and quantitative ventilation-perfusion scans aid in determining the percentage of total pulmonary function present on a given side, and thus such studies help predict post-resection pulmonary function.

Surgical resection

Surgical resection generally involves lobectomy or pneumonectomy. Operative mortality for pneumonectomy is 6%, for lobectomy 3%, and for lesser resections 1.4%. Patients over 70 years of age have a significantly higher operative mortality. If the tumor can be removed with satisfactory margins by lobectomy, this is usually the procedure of choice. If the tumor is more proximal, thus precluding a lobectomy, a pneumonectomy should be performed. Both procedures encompass the lymph node drainage of the primary tumor, since the lymphatics drain along the lobar and main bronchi.

There is evidenee that small peripheral bronehogenic eareinomas can be reseeted by segmenteetomy or wedge reseetion. These lesser proeedures are usually reserved for patients who are elderly, who have limited pulmonary reserve, or who have a seeond primary. There is eurrently a prospeetive study eomparing the survival and time to reeurrence in patients with peripheral tumor treated by loeal resection versus lobeetomy.

Intraoperative mediastinal lymph node sampling is quite important, sinee intranodal metastases are oeeasionally found in nodes which appear grossly normal. Nodes should be sampled from the peritraeheal, subearinal, inferior pulmonary ligament, hilar, lobar, and segmental areas. This is the only way that aeeurate staging of bronehogenie tumors ean be aehieved, and it is neeessary to determine whether adjuvant therapy is neeessary. If lymph nodes are found to eontain tumor, a formal lymph node reseetion should be earried out in addition to resection of the primary tumor.

SUPERIOR SULCUS TUMORS

Superior suleus tumors ean be eonsidered resectable if there is no invasion of the vertebral body and no true Paneoast's (Horner's) syndrome. Treatment eonsists of preoperative radiation (3,500–4,500 rads) to the mediastinum, upper chest, and base of neek over a three- to four-week period, followed three weeks later by an upper lobectomy with en bloc resection of the first three ribs. Oeeasionally, the transverse proeesses and a portion of the braehial plexus may also have to be exeised if invaded by tumor. Five-year survival has been reported to be 31% and as high as 50% in those with no nodal involvement.

TUMORS INVOLVING THE CHEST WALL

Primary tumors involving the ehest wall by extension should also be removed en bloe. Generally, the rib above and below the area of invasion and a margin of several eentimeters anterior and posterior to the tumor should be obtained. Clinieal studies to determine the effieaey of postoperative irradiation in extending long-term survival of these patients are in progress. Operative mortality is higher than for those not requiring ehest wall reseetion (9%–15%), but five-year survival is 33%–38%.

MULTIPLE PRIMARY CARCINOMAS

Multiple primary bronehogenie eareinomas should be reseeted if the eriteria for resection ean be met, ie, antieipated eomplete reseetion of all known disease, ineluding criteria for mediastinal nodal disease. A five-year survival of 36% has been reported in one series. Another series reported a three-year survival rate of 27% following removal of second primary bronehogenie eareinoma. Limited reseetions should be performed when possible to conserve lung tissue and pulmonary reserve.

SURVIVAL

The overall survival rate for non-small eell lung eaneer patients is approximately 10%–12%. Only 25% of patients presenting with bronehogenie eareinoma will be eandidates for possibly eurative surgieal reseetion. Of those who are surgieally reseeted, approximately 30%–40% will be five-year survivors. Survival of those reseeted can vary from 65%–75% in patients with stage I squamous eell eareinoma, to less than 20% in stage III eareinomas, thus demonstrating the importance of adequate surgical staging. It must be emphasized that the treatment offering the best possibility of eure is surgieal resection.

BRACHYTHERAPY AND LASER THERAPY

Radioactive gold seeds and laser non-ionizing radiation

Obstrueting neoplastic lesions of the traehea and mainstem bronehi are, with very rare exeeptions, unresectable. Disease of this type is of major importanee beeause it eauses severe unrelenting symptoms of suffoeation. In patients so afflicted, effective palliative treatment is essential for symptom relief as well as for survival.

When the obstrueting malignaney is of the small eell lung cancer (oat eell) variety, radiation therapy ean be rapidly effeetive. When the obstruction is caused by cancer of the non-small eell types, eonventional radiation is slower in its effeet. In these situations, effeetive palliation ean be achieved by bronehoseopie implantation of radioaetive gold seeds or by laser photo-coagulation and vaporization. In experieneed hands, these teehniques provide rapid symptomatie improvement with minimal risks. Mainstem and lobar lesions can be most effeetively treated if the procedure is initiated before complete airway elosure oeeurs.

RADIOTHERAPY OF BRONCHOGENIC CARCINOMAS

The treatment team

Sinee radiotherapists are trained extensively in oncology, early eonsultation with a radiotherapist is reeommended, preferably during the early work-up of the patient, so that a treatment plan ean be devised that uses the talents of the radiation oncologist, surgieal oncologist, and medieal oncologist. This is partieularly important because of the interaetive nature of the agents used and proeedures employed by the various speeialties. With adequate planning, the adverse eonsequenees of such interaetions ean be minimized and the maximum benefit from each speeialty realized.

Radiotherapy for advanced disease

In advanced stage disease, radiation therapy ean be delivered with a eurative or palliative intent. Preoperative radiation therapy as a general proeedure has not been shown to contribute to prolonged survival. However, in eertain unusual and well-defined eireumstanees, it can be appropriate. Several clinical reports have suggested that radiation therapy ean be used postoperatively to treat those patients with residual tumor or with evidenee of spread of tumor to regional lymph nodes.

RADIOTHERAPY WITH CURATIVE INTENT

When radiation therapy is used with a curative intent in patients with advaneed disease, it is neeessary to determine if the patient has suffieient pulmonary reserve to tolerate such ag-

gressive radiation therapy. As with surgery, radiation therapy results in the permanent loss of some normal functioning lung, and the patient must be able to tolerate such losses. If the patient is a candidate for radiation therapy with a curative intent, it is generally accepted that higher doses result in the best disease-free survival rates and that treatment given in a continuous fashion yields survivals that are somewhat better than treatment given in a divided fashion. The morbidity associated with continuous therapy versus divided therapy is equivalent. Aggressive radiation therapy generally not only encompasses treatment to the primary tumor but also to regional lymph nodes.

RADIOTHERAPY WITH PALLIATIVE INTENT

In those cases where aggressive curative radiation therapy is not appropriate, it may be necessary to deliver radiation treatments designed to palliate specific symptoms. It is well established that radiation therapy can be very effective in this setting, particularly for the treatment of pain caused by metastatic deposits and CNS changes due to brain metastases. If a patient is considered terminal, such palliation should be delivered as rapidly as possible. In general, palliative radiation therapy can be accomplished with lower total doses delivered at an accelerated rate.

Prophylactic palliative radiotherapy

For many years radiation therapy has been used as prophylactic palliative treatment of asymptomatic brain metastases in small cell lung cancer. Recently there has been discussion regarding its use as prophylactic palliation for other histologic variants of lung cancer as well. In small cell lung cancer, it is well established that prophylactic whole-brain irradiation can significantly reduce the incidence of relapse due to brain metastases. Unfortunately, in recent years a number of patients who are long-term survivors of small cell lung cancer have developed CNS difficulties. It is not clear at present if this reflects prophylactic whole-brain irradiation, combination aggressive multi-agent chemotherapy, or both. Nevertheless, the radiation therapy community is reassessing whole-brain prophylactic therapy and will continue to evaluate techniques for delivering such treatment safely, as well as identifying those groups who may potentially most benefit.

Facility requirements for optimum treatment

With the recent development of free-standing radiation therapy facilities in Texas, physicians in the state must be aware of the varied capabilities of these different radiation installations and those which are affiliated with major medical centers and tumor institutes. There is a broad range of equipment available for radiation therapy, and the larger centers have the technological backup and potential for technically sophisticated radiation therapy. One can assume that a multimodality center with multiple photon capability is more likely to offer optimum quality radiation therapy than a small facility with limited resources.

MEDICAL ONCOLOGY

Non-small cell lung cancer

The role of chemotherapy in the management of patients with non-small cell lung cancer (NSCLC) is yet to be defined. Chemotherapeutic management of patients with advanced or metastatic NSCLC infrequently produces durable antitumor responses and has not resulted in survival benefit. In addition, the failure to identify single-agent or combination drug regimens with important antitumor activity in NSCLC provides limited rationale for adding chemotherapy to primary surgical and radiotherapeutic management of this class of diseases.

CHEMOTHERAPEUTIC MANAGEMENT OF NSCLC

Adjuvant therapy for surgical or radiotherapeutic primary management

Adjuvant chemotherapy following surgery or radiotherapy for cure of NSCLC remains investigational. Although most patients with stage I (T1 N0 M0) lesions may expect a high likelihood of disease-free survival (approximately 65%–75% five-year survival), other categories of patients with completely resected or radically irradiated NSCLC may not enjoy such a favorable expectation. Although radical surgery or radiotherapy may render a patient with high-risk lung cancer free of clinical or pathological evidence of disease, prognosis may yet be quite poor. Such patients may be offered aggressive investigational adjuvant therapy (multimodality therapy or chemotherapy).

Chemotherapy for advanced metastatic or recurrent NSCLC

Single-agent or combination chemotherapy has been examined extensively for the management of metastatic or recurrent NSCLC. Although 10%–20% of patients may show some response, palliative chemotherapy has not improved survival. Consequently, no standard chemotherapeutic approach may be recommended in this situation. Patients with advanced NSCLC should be offered supportive therapy including radiotherapy to symptomatic metastatic lesions. In addition, such patients may represent candidates for investigational multimodality therapy or chemotherapy.

Small cell lung cancer

The failure of surgical management to alter the natural history of small cell lung cancer (SCLC) and the encouraging results of multi-agent systemic therapy have led to the acceptance of aggressive combination chemotherapy as the treatment of choice for newly diagnosed SCLC. Chemotherapeutic management of both limited (isolated to one hemithorax) and advanced or metastatic SCLC has resulted in responses in a majority of patients and improvement in overall survival. Surgery and radiotherapy, either separately or in combination, are now being evaluated as consolidation therapy for patients initially managed by chemotherapy. The key to successful treatment of SCLC is prompt diagnosis and staging and initiation of chemotherapy without delay.

CHEMOTHERAPEUTIC MANAGEMENT OF SCLC

Chemotherapy for limited SCLC

Combination chemotherapy represents the primary treatment modality for newly diagnosed limited SCLC. Three- and four-drug regimens may induce objective responses in 80%–90% of patients, approximately half of which are complete responses. Active drugs used include cyclophosphamide, nitrogen mustard, doxorubicin, methotrexate, etoposide, vincristine, and the nitrosoureas. For patients in whom treatment succeeds in producing a complete response, survival enhancement is realized (four- to five-fold survival improvement over untreated patients; median survival one year). Approximately 5%–10% of limited-disease patients experience long-term disease-free survival suggesting cure.

The use of chest radiotherapy in patients experiencing a complete response to chemotherapy remains controversial. Although no survival benefit is observed for patients so treated, the fraction of patients with long-term disease-free survival is increased. Because of the risk for relapsing disease in the brain (approximately 21%), prophylactic brain irradiation should be considered in those patients with a complete response. However, the long-term neurologic sequelae of such therapy may be substantial.

Chemotherapy for extensive SCLC

Combination chemotherapy with three to four active agents is appropriate primary therapy of newly diagnosed extensive (metastatic, extrathoracic, or involving the contralateral chest) small cell lung cancer. Such therapy induces objective responses in 60%–70% of patients with extensive disease, with fewer complete responses (20%–30%) than observed in limited range SCLC. The same drugs active in limited SCLC are also active in extensive SCLC when used in three- to four-drug combinations. Median survival for responding patients is 33 weeks. Unmaintained long-term survivors are infrequent in extensive SCLC patients.

The use of chest irradiation for extensive SCLC is even less well-defined than for limited disease. Radiotherapy combined with chemotherapy does not appear to have an impact on survival and thus offers no benefit over multi-drug chemotherapy alone. Prophylactic brain irradiation can be used in patients with extensive disease but probably should be reserved for complete responders to chemotherapy.

Special management considerations

For patients with superior vena cava syndrome from SCLC, chemotherapeutic management may be preferred over irradiation. The action of chemotherapy is sufficiently prompt that response may be equivalent to that observed with radiotherapy.

Patients with SCLC may present with a small peripheral solitary nodule. Thirty percent of these patients undergoing primary surgical resection may expect long-term survival and perhaps cure. Aggressive chemotherapy is essential to the proper post-surgical management of these individuals. In addition, irradiation of the brain and chest may be considered.

RESULTS AND PROGNOSIS

The results of aggressive treatment of both NSCLC and SCLC are not especially good. While considerable progress in therapeutic strategies has been made during the past decade, the overall survival is quite poor. In early stage disease, surgical resection offers a high probability of survival beyond five years. For the majority of patients, however, disease has spread well beyond the confines of the primary tumor at the time of diagnosis; and often, especially with SCLC, there is distant metastasis. In the final analysis, nearly 90% of patients will die with their disease within five years of diagnosis, and most of these will succumb within the first year. Recurrence of disease after initial response to treatment will be the fate of most patients.

The site of clinically evident recurrence in inoperable cancer of the lung is determined, in some measure, by cell type. After irradiation of the primary tumor mass, squamous cell carcinomas reappear at or near the site of the original primary tumor in about half the patients. Distant metastases appear in 20% of patients, and local as well as distant recurrences are seen in 15%.

In the other types of bronchogenic carcinoma (small cell, adenocarcinoma, large cell), the pattern of recurrence after initial radiation therapy to the chest is almost the opposite. Nearly half the patients will develop recurrent disease at one or more distant sites—contralateral lung, bone, brain, or liver—while 20% will experience local recurrence.

In patients who receive aggressive surgical treatment for non-small cell lung cancer, the clinical course is distinctly altered. After apparent "curative" resection, not only are there more long-term survivors but the pattern of recurrence seems to be independent of cell type or stage of disease. Patients with squamous cell carcinoma as well as those with adeno- and large-cell cancer will experience distant metastases as the initial evidence of disease relapse 70% of the time, and local recurrence without concurrent distant spread only 20% of the time.

The median survival time of non-surgically treated patients is in the range of seven months to a year and, except for small cell cancer (see Medical Oncology section), is not appreciably altered by treatment. This does not mean that all non-surgical treatment modalities for non-small cell lung cancer are without value or purpose, however. Radiotherapy and combination drug therapy, as well as radioactive gold seed implantation and laser photoradiation, can substantially alleviate many of the more distressing symptoms.

Thus for most patients, the several subspecialty oncologists, together with the primary physician, can alter the mode of death, even though they cannot modify its time. While this may not be one of the most desirable duties of a physician, it can be one of the most noble and challenging.

Attentive, sympathetic, and effective management of patients with terminal lung cancer demands the timely use of a multiplicity of techniques, drugs and services. It is difficult for most physicians to mobilize the resources necessary for optimum care without substantial assistance. Fortunately, most communities have developed resources to supply this assistance. One of the better mechanisms for implementing a complex yet

sensitive management plan is through a local or regional hospice program. In addition to direct patient care, hospice programs provide substantial psychological and social support to the patient's family.

SELECTED REFERENCES

Incidence and pathology

Cancer statistics. CA 36:9, 1986.

Cullen JW, McKenna JW, Massey MM: International control of smoking and the US experience. Chest (suppl) 89:206S, 1986.

Sobin LH, Yesner R: Histologic typing of lung tumors, in International Histologic Classification of Tumors. Geneva, WHO, 1981.

Epidemiology and etiology

Blot WJ, Fraumeni JF: Geographic epidemiology of cancer in the United States, in Schottenfeld D, Fraumeni JF (eds): Cancer Epidemiology and Prevention. Philadelphia, N M Saunders, 1982, pp 179–193.

Buffler PA, Pickle LW, Mason TJ, et al: The causes of lung cancer in Texas, in Mitzell M, Correa P (eds): Lung Cancer: Causes and Prevention. Deerfield Beach, Fla, Verlag Chemie International, Inc, 1984, pp 83–99.

Doll R, Peto R: The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today. JNCI 66:1191–1308, 1981.

Loeb LA, Ernster VL, Warner KE, et al: Smoking and lung cancer: an overview. Cancer Res 44:5940–5958, 1984.

Matthews JI, Blanton HM: Lung cancer: an update. Primary Care 12(2):267–281, 1985.

Newell GR, Lynch K, Carr DT: Decreasing lung cancer deaths among young men in Texas. Tex Med 81(9):29–31, 1985.

Detection and diagnosis

Spiro SG: Diagnosis and staging. Recent Results Cancer Res 92:16, 1984.

Van Houtte P, Salazar OM, Phillips CE, et al: Lung cancer, in Rubin P (ed): Clinical Oncology, ed 6. New York, American Cancer Society, 1983, pp 142–153.

Classification and staging

Alderson PO: Scintigraphic evaluation of patients with lung carcinoma. Chest (suppl) 89:245S, 1986.

Heitzman RE: The role of computed tomography in the diagnosis and management of lung cancer. Chest (suppl) 89:237S, 1986.

Mountain CF: A new international staging system for lung cancer. Chest (suppl) 89:225S-233S, 1986.

Surgery

Breyer RH, Karstaedt N, Mills SA, et al: Computed tomography for evaluation of mediastinal lymph nodes in lung cancer: correlation with surgical staging. Ann Thorac Surg 38:215–220, 1984.

Gass GD, Olsen GN: Preoperative pulmonary function testing to predict postoperative morbidity and mortality. Chest 89:127–135, 1986.

Grillo HC: Carinal reconstruction. Ann Thorac Surg 34:356–373, 1982.

Holmes EC, Hill LD, Gail M: A randomized comparison of the effects of adjuvant therapy on resected stages II and III non-small cell carcinoma of the lung. Ann Surg 202:335, 1985.

Jensik RJ, Faber LP, Kittle CF, et al: Survival following resection for secondary primary bronchogenic carcinoma. J Thorac Cardiovasc Surg 82:658, 1981.

Luke WP, Pearson FG, Todd TRJ, et al: Prospective evaluation of mediastinoscopy for assessment of carcinoma of the lung. J Thorac Cardiovasc Surg 91:53–56, 1986.

Pearson FG, DeLarue NC, Ilves R, et al: Significance of positive superior mediastinal nodes identified at mediastinoscopy in patients with resectable cancer of the lung. J Thorac Cardiovasc Surg 83:1–11, 1982.

Piehler JM, Pairolero PC, Weiland LH, et al: Bronchogenic carcinoma with chest invasion: factors affecting survival following en bloc resection. Ann Thorac Surg 34:684–691, 1982.

Stanford W, Barnes RP, Tucker AR: Influence of staging in superior sulcus (Pancoast) tumors of the lung. Ann Thorac Surg 29:406–409, 1980.

Wernly JA, DeMeester TR, Kirchner PT, et al: Clinical value of quantitative ventilation-perfusion lung scans in the surgical management of bronchogenic carcinoma. J Thorac Cardiovasc Surg 80:535, 1980.

Radiotherapy

Bleehen NM: Radiotherapy for small cell lung cancer. Chest (suppl) 89:268S, 1986.

Cox JD: Non-small cell lung cancer: role of radiation therapy. Chest(suppl) 89:284S, 1986.

Lichter AS, Bunn PA Jr, Ihde DC, et al: The role of radiation therapy in the treatment of small cell lung cancer. Cancer 55:2163, 1985.

Medical oncology

Livingston RB: Current chemotherapy of small cell lung cancer. Chest (suppl) 89:258S, 1986.

Soupkop M: Management of non-small cell cancer. Recent Results Cancer Res 92:79, 1984.

Results and prognosis

Berry RJ: Palliative management. Recent Results Cancer Res 92:110, 1984.

Hansen HH, Elliott JA: Patterns of failure in small cell lung cancer. Recent Results Cancer Res 92:43, 1984.

Hyde L, Wolf J, McCracken S, et al: Natural course of inoperable lung cancer. Chest 64:309, 1973.

Mountain CF, McMurtrey MJ, Frazier OH, et al: Present status of postoperative adjuvant therapy for lung cancer. The Cancer Bulletin 232(3):108–112, 1980.

Stanley K, Coe JD, Petrovich Z, et al: Patterns of failure in patients with inoperable carcinoma of the lung. Cancer 47:2725, 1981.

Breast cancer

Breast Oncology Workgroup
George R. Brown, MD, Chairman
Robert E. Askew, MD; H. Stephen Gallager, MD; Gabriel N. Hortobagyi, MD; Eleanor D. Montague, MD; Louis Eaton Neff, MD; C. Kent Osborne, MD; George J. Race, MD, PhD; Robert J. Salem, MD; Courtney M. Townsend, Jr, MD; Dennis E. Welch, MD

Contents

81 INTRODUCTION
81 EPIDEMIOLOGY, RISK FACTORS, AND ETIOLOGY
82 DETECTION
82 DIAGNOSIS
84 STANDARDS FOR PATHOLOGIC EXAMINATION OF BREAST SPECIMENS
85 ESTROGEN AND PROGESTERONE RECEPTOR ASSAYS
85 HISTOLOGIC TYPES OF BREAST CANCER
86 STAGE INFORMATION
88 TREATMENT OVERVIEW
93 FOLLOW-UP
93 DRUG THERAPY FOR SEVERE CHRONIC PAIN IN CANCER
93 CARCINOMA OF THE BREAST IN MEN
93 PREPUBERTAL BREAST CANCER
93 REFERENCES
94 BIBLIOGRAPHY

INTRODUCTION

In women, breast cancer is the most common malignancy and a leading cause of cancer deaths. It strikes at a relatively young age; and, because the breast is symbolic of female sexuality in our culture, its physical and emotional impact is tremendous. There is no known method of prevention, and the disease is highly variable and unpredictable in its course. It carries the risk of metastasis for 20 years or more after treatment. When it is progressive, the disease can run a prolonged and painful course.

Fortunately, in the past ten years, researchers have learned a great deal about the complexity of breast cancer, risk factors for developing the disease, and the relative effectiveness of a number of surveillance and treatment modalities. Treatment has become more complex and offers the patient and her treatment team a wider range of choices.

A combined modality approach is now recognized as optimal. The treatment of breast cancer is no longer a "one-man" process, but rather necessitates an integrated, cooperative team effort from the beginning. In selected patients with localized operable cancer, partial mastectomy (lumpectomy) with axillary node dissection *and* radiation have resulted in excellent cosmesis, tumor control, and survival rates comparable to those obtained with radical mastectomy in numerous studies. In addition, modern reconstruction techniques offer excellent cosmesis to patients who have had a mastectomy.

In certain subsets of patients, adjuvant chemotherapy and hormonal therapy have delayed recurrence and improved survival. Estrogen and progesterone receptor assays of tumor tissue enable physicians to predict response to treatment and prognosis, and the role of these receptors has been greatly clarified. In patients with metastatic disease, new hormonal manipulations and systemic chemotherapy can improve the quality of life and sometimes prolong survival.

Carefully designed randomized clinical studies, many of which are carried out by multi-institutional cooperative groups, are largely responsible for these advances. Future progress is expected to come through continued clinical research using the cooperative group mechanism. This report will attempt to summarize current knowledge and its application and suggest guidelines for optimal patient care.

EPIDEMIOLOGY, RISK FACTORS, AND ETIOLOGY

Introduction

Breast cancer is the most common cause of death in middle-aged women (40–55) and the most common cause of death from disease in younger females (25–35). Breast cancer is slowly increasing in incidence and prevalence. For every 100,000 females, there are 92 new cases (.09%) of breast cancer diagnosed. For 1987, 123,000 new diagnoses have been predicted. Incidence increases with age. Overall, breast cancer will strike one of every ten females in the United States at some time in life, accounting for 27% of all cancers in females. Less than 1% of all breast cancer occurs in men. The mortality rate of 27 per 100,000 has remained essentially unchanged for 50 years. In Texas, breast cancer accounts for 18% of cancer deaths in females.

Risk factors for the development of breast cancer

MAJOR FACTORS

Age—Breast cancer is uncommon under age 30. There is a rapid increase in incidence after age 40.

Genetics—The risk is increased four-fold in women with a family history of premenopausal breast cancer in mother or sister and eight-fold if bilateral breast cancer was present. A minimal increased risk is observed in first-degree relatives (daughters) of postmenopausal patients (1.5-fold).

Previous breast cancer—The risk of a second primary in the opposite breast is 8–14 times higher than in the general population.

Previous benign breast disease—There is an increased risk in women with history of previous benign breast disease showing histological evidence of significant ductal or lobular atypical hyperplasia. This particular pathologic finding by itself, however, does not require mastectomy for treatment. The majority of women with benign breast disease have no increased risk of breast cancer.

History of radiation exposure—An increased incidence of breast cancer has been reported in women with history of radiation exposure:
During atomic bombing in Japan in World War II;
During fluoroscopy for the management of tuberculosis;
From radiation therapy for benign disease (ie, postpartum

mastitis, acne, and thymic enlargement);
But *not* from radiation therapy for cancer of the opposite breast.

MINOR FACTORS
Menarche before age 11 and menopause after age 50.
Nulliparity or first term delivery after age 30.
High socioeconomic status, high-fat diet, obesity.
Prolonged estrogen stimulus has been postulated to increase risk, particularly in adolescents and premenopausal females, but as yet, cyclic oral contraceptives or postmenopausal use of estrogens have not been shown to increase the incidence of breast cancer.
Personal history of cancer of ovary, endometrium, colon, or salivary glands.

Summary
Physicians must be aware of breast cancer as a risk for every woman; it cannot really be excluded in anyone based on the absence of commonly recognized risk factors. In this regard, it is interesting to note that 75% of breast cancer patients have no positive risk factors at the time of diagnosis.

DETECTION

Introduction
Detection is the initial discovery of an abnormality in the breast. Conventionally, most breast carcinomas are detected accidentally by patients themselves, and many carcinomas discovered in this haphazard way are relatively advanced. It has been unequivocally demonstrated (ie, Breast Cancer Demonstration Project), that a planned program of screening of asymptomatic women is capable of detecting a high percentage of early-stage carcinomas. Treatment of breast cancer in the preinvasive or microinvasive stage yields long-term disease-free survival rates on the order of 95%. Such programs, whether community-based or carried out in a physician's office, represent the best hope for reducing breast cancer mortality.

Screening
The responsibility for breast cancer screening lies both with women themselves and with all physicians who see essentially well women for periodic examination. In some communities, there are special breast cancer detection centers, many of which accept self-referred women. Physicians may find it economical and expedient to refer patients to such clinics for screening.

The screening examination may be carried out in a physician's office and should be part of every comprehensive periodic examination of every woman in the breast cancer age group.

The screening examination has four components: a history, with special attention to risk factors; physical examination of the breast by a physician or trained paraprofessional; instruction in breast self-examination; and mammography.

The history focuses on family history, history of prior breast symptoms or operations, menstrual status, parity, and other factors listed above. Frequently a questionnaire is used to collect this information. In some screening centers, histories are taken by trained volunteers.

Physical examination of the breast includes systematic, gentle palpation of all breast tissue; inspection of the breast in several positions; inspection of the nipple and areola; and palpation of the axillary, infraclavicular and supraclavicular node-bearing areas.

Breast self-examination is best taught one-on-one. Brochures, films, and video tapes demonstrating the procedure are available and are useful adjuncts to personal instruction. Experience has shown that repetition of instruction at regular intervals is effective in encouraging compliance. By age 20, every woman should be taught proper breast self-examination.

Mammography, the radiographic examination of the breast, is a highly accurate, cost-effective screening modality. The examination should be performed by a radiologist specially trained and experienced in this technique. Equipment specifically designed for mammography should be used. Both xeroradiographic and film-screen techniques are satisfactory. With modern equipment and techniques, radiation exposure is minimal. The primary objective of screening mammography is to detect occult cancers. Fear of radiation carcinogenesis is not a valid reason for omitting mammography from the screening examination.

RECOMMENDATIONS
The first, or baseline, screening, including mammograms, should be obtained by age 40. An earlier age may be preferable when there is a personal history of breast cancer or a history of premenopausal breast cancer in the patient's mother and/or sisters.

Subsequent mammographic examinations should be performed at one- to two-year intervals determined by the combined analysis of physical and mammographic findings and other risk factors, unless medically indicated sooner.

Annual mammography and physical examinations are recommended for all women over age 50.

OTHER SCREENING TECHNOLOGIES
Thermography, ultrasonography, and diaphanography have certain applications in the differential diagnosis of breast lesions, but all are ineffective in screening. In the interest of controlling costs, they should not be used as screening procedures.

DIAGNOSIS

Introduction
Every breast abnormality requires a definitive diagnosis. A distinction must be made between the patient with a "lump" or suspicious mammographic finding of undetermined nature and the patient with definite findings consistent with a malignant lesion of the breast.

A thorough physical evaluation with emphasis on the breast,

axilla, and neck, coupled with a detailed history and aided by mammography, are primary steps in the diagnosis of breast lesions. Aspiration of cystic masses may solve the dilemma, and re-examination at a different phase of the menstrual cycle may aid in the diagnosis, avoiding the need for an unnecessary biopsy.

Biopsy of a lesion is mandatory if any of the following are found:

1. A discrete, definite mass or thickening on palpation (particularly in the absence of suspicious mammographic findings). All palpable lumps should be biopsied.
2. Bleeding from the nipple or excoriation of the nipple, nipple retraction, skin dimpling or *peau d'orange*.
3. A suspicious mammographic finding. In many cases, diagnosis or suspicion of a malignant lesion can be established on mammography. Mammography is the only means of detecting occult lesions and of identifying multicentricity or bilaterality of a malignancy. Ultrasound can be used as an adjunct to mammography to determine the density (solid or cystic) of the suspicious lesion.
4. Bloody or necrotic fluid obtained on a cystic aspiration, or the recurrence or persistence of a mass following aspiration.

When, as a result of physical examination or mammographic findings, it is concluded that there is a need to determine whether a lesion is malignant or benign, there are now new strategies for the surgeon to consider when planning the biopsy and subsequent management of the patient. The biopsy should be done with all treatment modalities in mind, and should be done only by experienced physicians. Therapeutic options and cosmesis must be considered and all modalities discussed with the patient.

Biopsy procedures

The following describes various breast biopsy procedures, all of which are acceptable:

NEEDLE ASPIRATION

Needle aspiration of a suspicious lesion for cytology should be performed only in those areas where there are appropriately trained cytopathologists experienced in the analysis of needle aspiration. The needle aspiration procedure is best performed with a 22–25-gauge fine needle, placing the aspirate on a slide for cytological evaluation.

If the examination is positive for malignancy, the diagnosis is confirmed and further appropriate treatment is planned. If the results of the cytological evaluation are negative, a biopsy or surgical removal is necessary.

CORE NEEDLE BIOPSY

If no experienced cytopathologist is available, a needle biopsy using a large-bore tissue needle rather than a needle aspiration technique is the recommended method of biopsy. Both aspiration and core needle biopsies may indicate the presence or absence of cancer, but they are limited in what they reveal.

If the results are negative, surgical removal of the mass is recommended.

ADVANTAGES OF NEEDLE ASPIRATION OR CORE NEEDLE BIOPSY

Using these techniques to obtain a firm diagnosis prior to hospitalization makes planning possible for the patient and physician.

The patient knows her diagnosis before being anesthetized. The surgeon has the opportunity to discuss more specifically the diagnosis, prognosis, and various therapeutic options that are available. The patient is therefore allowed to participate to a certain extent in the decision as to the type of treatment or mastectomy she might have. Tissue planes are not opened up. The needle procedures also permit better planning of the incision and the surgery. This allows less skin sacrifice than would occur in the case of open biopsy followed by mastectomy.

EXCISIONAL BIOPSY

This procedure is defined as the removal of an entire lesion, including a significant margin of contiguous normal-appearing tissue.

(Note: *Incisional* biopsies, by which a selected portion of the lesion is removed, are reserved for locally advanced lesions.)

An open biopsy with frozen section is still the most commonly employed type of biopsy. The excisional biopsy should be planned carefully according to two considerations: (1) the therapeutic options, including breast conservation, and (2) cosmesis.

MAMMOGRAPHICALLY DIRECTED BIOPSY

When biopsy is done to identify the cause of a nonpalpable, mammographically discovered abnormality, special surgical procedures must be employed, and special pathological techniques are required.

The first step is the localization of the area of tissue to be removed. This is best done by inserting a needle or hooked wire into the breast close to the lesion shortly before operation. Alternatively, a mixture of visible and radiopaque dyes may be injected. The relationship of the marker to the lesion is verified radiographically. The surgeon then removes the indicated tissue and submits it for examination.

It is essential to determine that the suspect lesion is contained in the specimen. This is done by making a radiograph of the intact specimen and comparing it to the preoperative mammogram. If the lesion (most often a cluster of calcifications) is identified in the specimen, further examination may continue. If it is not present, study of the mammogram and localization images may suggest a site for removal of additional tissue.

The second step in the examination of the specimen is to assure that the suspect lesion is submitted in tissue blocks for histologic study. To accomplish this, the entire specimen is sliced at intervals of 3–4 mm. The slices are arranged on a sheet of plastic and a second specimen radiograph is made. By reference to the resulting image, appropriate portions of the tissue are selected for embedding. Block numbers should be noted on the radiograph.

When histologic sections from these blocks are examined, the pathologist must keep in mind the necessity of identifying

the calcification or other lesion for which the operation was performed. Step sections are frequently required. Because of the time required to accomplish this procedure, biopsy of a nonpalpable lesion is usually best planned as part of a two-step procedure, avoiding the use of frozen sections. The surgical procedure is then terminated after it has been determined that the lesion has been removed (see above).

The procedure outlined is mandatory when nonpalpable lesions are to be biopsied. Biopsy for an abnormality detected by mammogram should only be attempted when adequate facilities are available and when the necessary close cooperation of surgeon, radiologist, and pathologist is logistically possible.

BREAST CONSERVATION

One-step versus two-step approach
With increasing use of breast-conserving procedures, a two-step approach combining biopsy and delayed definitive operation (if specimen is positive for cancer) has been encouraged. However, there are two instances in which a one-step procedure combining biopsy and lumpectomy would be appropriate.

One-step surgical approach
Prior to open biopsy, the surgeon should estimate the probability that the lesion is cancerous. When findings are highly indicative of cancer, then a decision is made as to whether the patient is a candidate for breast conservation or for mastectomy, should malignancy be confirmed.

If the tumor appears to be of appropriate size ($\leq$ 4cm), is in a favorable location (not subareolar), and the breast is sufficiently large, the likely decision is that lumpectomy and axillary dissection are feasible.

Using these criteria with the patient who is a candidate for breast conservation, it is recommended as a first choice that she be hospitalized and that, while she is under general anesthesia, an open biopsy be performed. This open biopsy is planned and carried out as if a lumpectomy were being done. If the presence of cancer is confirmed, an axillary dissection should be performed at the same time through a separate axillary incision.

If the biopsy embodies the features of a lumpectomy, ie, specimen margins free of tumor, a one-step procedure can be performed with the most comfort to the patient by use of general anesthesia. In this set of circumstances, there is no clear justification for resorting to a two-step procedure (the biopsy-lumpectomy and axillary dissection at two different hospital admissions under general anesthesia twice).

Two-step surgical approach
If, prior to biopsy, it appears that the patient is not a candidate for the above-mentioned procedure (because of tumor size, location, or breast size), the two-step procedure is used. After the presence of malignancy is confirmed histologically, treatment options should be discussed with the patient before definitive therapy is performed. The point to be emphasized is that breast removal does not have to follow the frozen section diagnosis immediately. Only an excessively long period between biopsy and definitive surgery would be considered detrimental.

Contraindications for breast conservation
The decision to employ breast conservation procedures is based on a number of factors. Contraindications to combined conservation surgery and radiation therapy include: tumors greater than 4 cm, multiple tumor masses (either clinical or radiographic), grave signs—such as skin edema, skin ulceration, fixation of tumor to chest wall, massive involvement of axillary nodes (greater than 2.5 cm in diameter), fixation of axillary node to overlying skin or deeper structures. The presence of Paget's disease of the nipple or subareolar tumors, or medical conditions that preclude radiation, such as active tuberculosis or collagen diseases, are also contraindications. In addition, there should be an adequate tumor-to-breast-size ratio so that a good cosmetic result can be achieved after excision of a tumor.

CONTRALATERAL BIOPSY
Contralateral breast biopsy is rarely indicated with the usual infiltrating carcinoma, unless clinical or radiographic evidence justify it. (Lobular carcinoma and a family history of bilateral or premenopausal breast cancer present an increased risk for tumor in the opposite breast.) With the reported relatively high incidence of simultaneous contralateral lesion with lobular carcinoma, some authorities recommend a mirror image breast biopsy. However, this is not universally advocated.

TISSUE ANALYSIS FOR HORMONE RECEPTORS
Regardless of whether a one-step or two-step approach is used, or whether the entire lesion is removed or only an incisional biopsy of a locally advanced breast cancer is performed, a sufficient amount of breast cancer *must* be identified by the pathologist and submitted for estrogen and progesterone receptor assays. In order to be sure that this information is obtained on every cancer, *all* breast masses should be placed in sterile containers *without any formalin*, the containers placed on ice, and the specimens transported promptly to the surgical pathology laboratory.

STANDARDS FOR PATHOLOGIC EXAMINATION OF BREAST SPECIMENS

The report of the pathologic examination of a mastectomy or biopsy specimen should include as much of the following information as the nature of the specimen permits.

Pathology report

EXTERNAL APPEARANCE OF SPECIMEN*
Side: right or left
Size of specimen: measurements in three dimensions
List of structures included in the specimen
Size, shape, and color of attached skin

* The performance of a frozen section for intraoperative diagnosis is not a valid reason for omitting detailed gross description of the lesion.

Location and extent of skin changes: scars, incisions, erythema, edema, flattening, retraction, ulceration
Appearance of the nipple and areola

INTERNAL APPEARANCE OF SPECIMEN*
Characterization of mammary tissue: fatty, fibrous, glandular, atrophic
Size, location, contents of cysts
For each discrete mass present:
  Its location: direction and distance from nipple, depth beneath surface, distance from base
  Its relationship to any biopsy incision or scar
  Its size: three dimensions to the nearest millimeter
  Its shape: spherical, ovoid, multinodular, stellate
  Its margin: circumscribed, non-circumscribed
  Its consistency
  Its color
  Its relationship or attachment to skin, muscle, nipple, fascia

APPEARANCE OF LYMPH NODES
Number of nodes included in specimen
Size of largest node
Number of nodes showing gross abnormalities
Presence or absence of matting

MICROSCOPIC APPEARANCE
For any primary carcinoma present:
  Its diagnosis and classification
  Its grade†
  Its pattern of invasion: infiltrative, expansile
  Its distance from surgical margins
  Extent and type of associated noninvasive carcinoma
  Involvement of adjacent structures: skin, muscle, fascia
  Characterization of mammary tissue not involved by carcinoma: number and types of non-neoplastic lesions
  Presence and extent of vascular involvement in breast tissue
  Characterization of lymph nodes:
    Number retrieved and studied
    Number containing metastases
    Number containing micrometastases (less than 2 mm in greatest dimension)
    Presence of metastases in perinodal adipose tissue
    Invasion of intramammary and/or dermal lymphatics
    Nodal involvement or presence of metastasis in lymph nodes at lower, middle, and upper axillary levels

ESTROGEN AND PROGESTERONE RECEPTOR ASSAYS

Introduction

Estrogen and progesterone receptor assays should be obtained on the primary tumor specimen and on metastatic lesions, if possible, at the time of recurrence.

Receptor assays have proven useful both in patients with primary breast cancer and those with metastatic disease. Patients with advanced breast cancer containing estrogen and/or progesterone receptors frequently respond to endocrine therapy. In contrast, less than 10% of those without tumor hormone receptors respond to endocrine therapy. In patients with primary breast cancer, those whose tumors lack receptors tend to show a more aggressive, less favorable course. Those with positive tumor hormone receptors have more indolent disease, a lower recurrence rate and improved survival, and may benefit from adjuvant hormonal therapy.

Methodology

Several methods have been developed to assay estrogen and progesterone receptors, and these procedures are widely available. All provide acceptable results if the tissue is processed, transported, and analyzed appropriately.

For assay, 200 mg to 1 g of tissue is necessary. Small specimens, needle biopsies, or cells derived from malignant effusions generally do not provide sufficient protein for a valid assay.

Tumor tissue should be trimmed of fat and connective tissue, chilled immediately on ice and either analyzed immediately or quick-frozen in liquid nitrogen for later assay. Frozen specimens should be stored at −70° C and shipped, if necessary, in dry ice. Specimens should not sit at room temperature for any longer than a few minutes, as this will result in receptor degradation and loss. Receptor assays should be performed only in laboratories with both internal and external quality control mechanisms.

Immunohistochemical assays using monoclonal antiestrogen receptor antibody are currently being validated and could be available in the near future. These assays would permit quantification of receptors in small specimens, needle biopsies, and effusions, as well as more accurate assessment of tumor cell heterogeneity.

HISTOLOGIC TYPES OF BREAST CANCER

Lobular carcinomas

Noninvasive
Lobular carcinoma in situ*
Invasive
  Invasive (infiltrating) lobular carcinoma†
  Signet ring cell carcinoma, lobular type†

Ductal

Noninvasive
  Intraductal carcinoma*
  Intracystic carcinoma*

*The performance of a frozen section for intraoperative diagnosis is not a valid reason for omitting detailed gross description of the lesion.
†For standard histologic grading systems, see Bloo and Richardson, Br J Cancer 11:359, 1957; Black, Opler, and Speer, Surg Gynecol Obstet 100:543, 1955; Fisher, Redmond, and Fisher, Patho Annu 15:239, 1980.

*Prognosis is generally favorable.
†Prognosis is generally unfavorable.

Invasive
Invasive (infiltrating) duct carcinoma‡
Mucinous (colloid) carcinoma†
Medullary carcinoma with lymphoid stroma
Tubular (well-differentiated) carcinoma*
Invasive (infiltrating) papillary carcinoma
Signet ring cell carcinoma, ductal type
Secretory (juvenile) carcinoma*

Metaplastic carcinomas (all invasive)
Breast carcinoma with squamous metaplasia
Squamous carcinoma (pure)†
Breast carcinoma with apocrine metaplasia (apocrine carcinoma)
Breast carcinoma with osteoclast-like giant cells
Breast carcinoma with sarcomatoid metaplasia (carcinosarcoma)†

Carcinomas of uncertain or variable cell type (all invasive)
Inflammatory carcinoma†
Adenoid cystic carcinoma*
Lipid-rich carcinoma
Carcinoma of breast, mixed cell types

Paget's disease of nipple§
Noninvasive§
Invasive§

STAGE INFORMATION

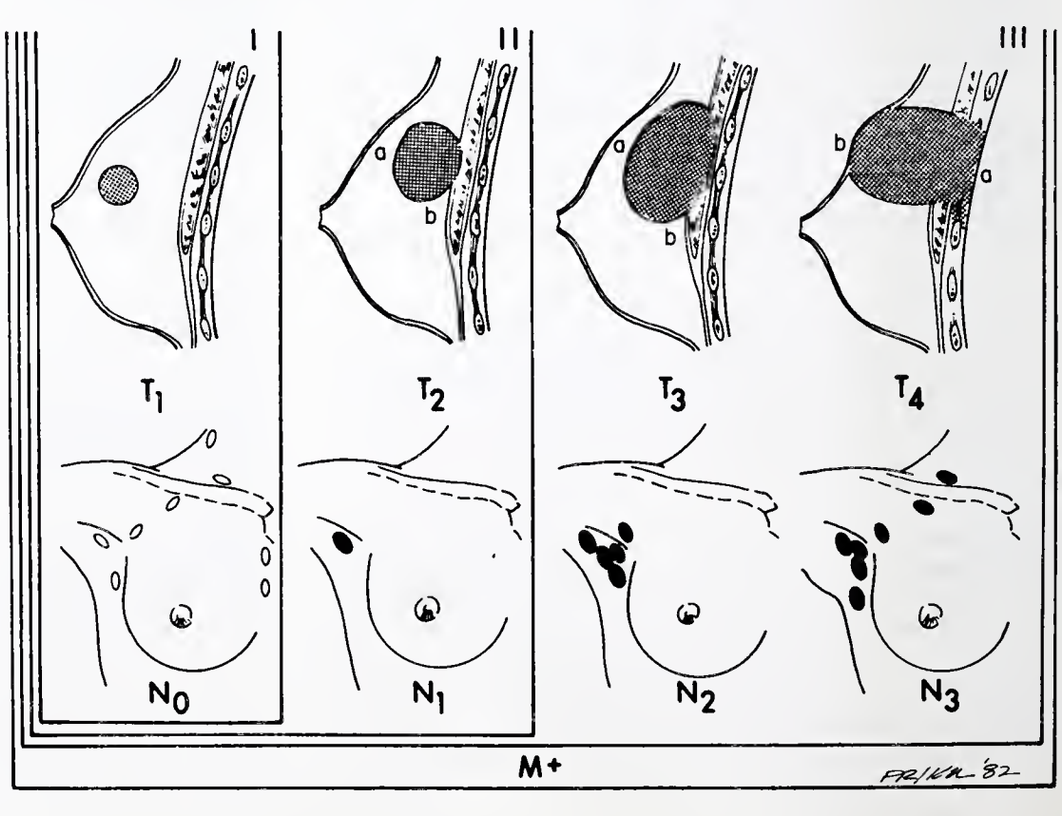
Introduction

Staging refers to the grouping of patients according to the extent of their disease. Therapeutic decisions are formulated in part according to staging categories but primarily on lymph node status, estrogen and progesterone receptor levels in the tumor tissue, menopausal status, and the general health of the patient. The use of systematic staging is useful in estimating prognosis and for comparing the results of different treatment programs.

The most commonly used staging systems are based on the TNM system (Fig 1).

*Prognosis is generally favorable.
†Prognosis is generally unfavorable.
‡Microinvasive types often seen, usually in association with noninvasive carcinoma. Microinvasion is defined as invasive carcinoma having a volume no greater than that of a sphere 0.5 cm in diameter (0.065 cc).
§May be accompanied by discrete intraductal carcinoma or invasive duct carcinoma, which should be recorded in a separate diagnosis, if present.

1. Stages defined by TNM classification. (From Rubin P (ed): Clinical Oncology: A Multidisciplinary Approach, ed 6. New York, American Cancer Society, Inc, 1983, p 123. Reprinted with permission.)



Clinical staging

Staging of breast cancer is performed initially on a clinical basis, that is, based on physical examination as well as laboratory and radiologic evaluation.

The following clinical staging system has been adapted from that adopted by both the UICC (International Union Against Cancer) and the AJC (American Joint Commission on Cancer Staging and End Results Reporting):

PRIMARY TUMOR (T)

TX: Minimum requirements to assess primary tumor cannot be met

T0: No evidence of primary tumor

Tis: *In situ* cancer (*in situ* lobular, pure intraductal, and Paget's disease of the nipple without palpable tumor) Paget's disease with a demonstrable tumor is classified according to the size of the tumor.
Inflammatory carcinoma should be reported separately.

T1: Tumor 2 cm or less in greatest dimension*
- T1a: No fixation to underlying pectoral fascia or muscle
- T1b: Fixation to underlying pectoral fascia or muscle
  - i: Tumor $\leq$ 0.5 cm
  - ii: Tumor $>$ 0.5 $\leq$ 1.0 cm
  - iii: Tumor $>$ 1.0 $\leq$ 2.0 cm

T2: Tumor more than 2 cm but not more than 5 cm in its greatest dimension*
- T2a: No fixation to underlying pectoral fascia or muscle
- T2b: Fixation to underlying pectoral fascia or muscle

T3: Tumor more than 5 cm in its greatest dimension*
- T3a: No fixation to underlying pectoral fascia or muscle
- T3b: Fixation to underlying pectoral fascia or muscle

T4: Tumor of any size with direct extension to chest wall or skin
Note: Chest wall includes ribs, intercostal muscles, and serratus anterior muscle, but not pectoral muscle
- T4a: Fixation to chest wall
- T4b: Edema (including *peau d'orange*), ulceration of the skin of the breast, or satellite skin nodules confined to the same breast
- T4c: Both of the above

NODAL INVOLVEMENT (N): CLINICAL-DIAGNOSTIC STAGE

NX: Regional lymph nodes cannot be assessed clinically

N0: Homolateral axillary lymph nodes not considered to contain growth

N1: Movable homolateral axillary nodes considered to contain growth

N2: Homolateral axillary nodes considered to contain growth and fixed to one another or to other structures

N3: Homolateral supraclavicular or infraclavicular nodes considered to contain growth or edema of the arm. (Edema of the arm may be caused by lymphatic obstruction, and lymph nodes may not then be palpable.)

*Dimpling of the skin, nipple retraction, or other skin changes except those in T4b may occur in T1, T2, or T3 without changing the classification.

DEFINITIONS FOR SURGICAL-EVALUATIVE AND POSTSURGICAL RESECTION-PATHOLOGIC STAGE

MX: Regional lymph nodes cannot be assessed (not removed for study or previously removed)

NO: No evidence of homolateral axillary lymph node metastasis

N1: Metastasis to movable homolateral axillary nodes not fixed to one another or to other structure

N1a Micrometastasis $\leq$ 0.2 cm in lymph node(s)

N1b Gross metastasis in lymph node(s)
- I Metastasis more than 0.2 cm but less then 2.0 cm in one to three lymph nodes
- II Metatasis more than 0.2 cm but less than 2.0 cm in four or more lymph nodes
- III Extension of metastasis beyond the lymph node capsule (less than 2.0 cm in dimension)
- IV Metastasis in lymph node 2.0 cm or more in dimension

N2: Metastases to homolateral axillary lymph nodes that are fixed to one another or to other structures

N3: Metastasis to homolateral supraclavicular or infraclavicular lymph node(s)

DISTANT METASTASIS (M)

MX: Minimum requirements to assess the presence of distant metastasis cannot be met

M0: No (known) distant metastasis

M1: Distant metastasis present
Specify sites according to the following notations:

PUL	pulmonary
OSS	osseous
HEP	hepatic
BRA	brain
LYM	lymph nodes
MAR	bone marrow
PLE	pleura
SKI	skin
EYE	eye
OTH	other

Clinical stage grouping

IN SITU CARCINOMA (NONINVASIVE)			
Stage Tis		N0	M0
INVASIVE CARCINOMA:			
Stage I	T1ai	N0	M0
	T1aii	N0	M0
	T1aiii	N0	M0
	T1bi	N0	M0
	T1bii	N0	M0
	T1biii	N0	M0
Stage II	T0	N1a or N1b	M0
	T1a or T1b	N1a or N1b	M0
	T2a or T2b	N0	M0
	T2a or T2b	N1a or N1b	M0

Stage IIIA	T0	N2	M0
	T1a or T1b	N2	M0
	T2a or T2b	N2	M0
	T3a or T3b	N0	M0
	T3a or T3b	N1	M0
	T3a or T3b	N2	M0
Stage IIIB	Any T	N3	M0
	Any T4	Any N	M0
Stage IV	Any T	Any N	M1

Pre-treatment clinical evaluation

Physical examination with careful description of tumor size, location, fixation, and node status is recommended. The evaluation of a patient for possible metastases depends on the tumor and its natural history, the stage of the disease, and the yield of the tests mentioned below. Bones, lungs, and liver are, in order, the most commonly affected organs in metastatic breast cancer. It is incumbent upon the physician to try to identify metastatic disease prior to definitive therapy.

STAGE I AND II BREAST CANCER

All patients with breast cancer, including patients with stage I disease, should have a CBC, chest x-ray, mammogram, and a chemical profile (SMA 12) with special attention paid to serum calcium, alkaline phosphatase, and liver enzymes. If these studies are all within normal limits, and history and physical examination are negative, the likelihood of distant metastases is rather low and no further testing is necessary.

Some experts advocate obtaining a bone scan in all clinically stage II patients, although there are no data obtained from prospective, randomized trials to support this. If a suspicious lesion is identified on a scan, it should be confirmed by bone x-rays.

STAGE III AND IV BREAST CANCER

Any T3 lesion with N0, N1 and any T with N2 nodes, or those tumors with (1) fixation to the skin of chest wall, or (2) attached axillary nodes, should have CBC, SMA 12, chest x-ray, and bone scan. If liver function studies are abnormal, or symptoms of liver, brain, or other metastases are present, appropriate imaging studies should be ordered. Liver and brain scans should not be done unless clinically indicated.

Pathological staging

Clinical evaluation of spread to the axilla has a high false-positive and false-negative rate. For this reason, post-surgical evaluation based on histologic findings is required to better determine prognosis.

UICC-AJC POSTSURGICAL TREATMENT PATHOLOGICAL EVALUATION CLASSIFICATION, 1977

Primary Tumor (T)

T0 No evidence of primary tumor

T1–4 Same as UICC-AJC classification (see Clinical Staging section) except for sub-division of T1 into:
- i: Tumor less than 0.5 cm
- ii: Tumor 0.5 cm—0.9 cm
- iii: Tumor 1.0 cm—1.9 cm

Nodal Involvement (N)

NX Regional lymph nodes cannot be assessed (not removed for study or previously removed)

N0 No metastatic homolateral axillary nodes

N1 Movable homolateral axillary metastatic nodes not fixed to one another or to other structures

N1a Lymph nodes with only histologic metastatic growth

N1b Gross metastatic carcinoma in lymph nodes
- i: Micrometastasis smaller than 0.2 cm
- ii: Metastasis (larger than 0.2 cm) in one to three lymph nodes
- iii: Metastasis to four or more lymph nodes
- iv: Extension of metastasis beyond the node capsule
- v: Any positive node greater than 2 cm in diameter

N2–3 Same as clinical UICC-AJC classification (see Clinical Staging section)

Recurrent/metastatic disease

RESTAGING PRIOR TO RETREATMENT

As recommended by the AJC, recurrent or metastatic disease requires restaging before retreatment, to determine as accurately as possible the extent of the disease. A complete search for other metastases (particularly liver, brain, lung, bone) should be pursued through blood chemistry (SMA 12) and radiographic and radioisotopic evaluation (chest x-ray, bone scan). Radioisotopic or CT scans of brain and liver are appropriate only when clinically indicated. Bone marrow biopsies should be performed only as clinically indicated.

Biopsy of recurrent or metastatic disease is strongly desired, to confirm the diagnosis and to obtain up-to-date tumor receptor information.

TREATMENT OVERVIEW

Introduction

The selection of treatment for breast cancer is influenced by the stage of disease, hormone receptor levels, age, and menopausal status.

The following is not intended to provide a rigid, dogmatic formula for the management of breast cancer patients. Rather, it is intended to emphasize the complexity of the decision-making process as a result of a variety of treatment options currently under study and as a result of the increasing use of breast-conserving treatment. It is hoped that this material will aid the primary care physician in formulating a strategy for the care of women with breast cancer.

Breast cancer in situ

Tis N0 M0

Five-year survival 95%

Breast cancer in situ is highly curable. In this very early stage, a one-step surgical procedure (described in the "Diagnosis" section under "Excisional Biopsy") can be employed to

provide both diagnosis and definitive surgical treatment. Incidence of micrometastases in the axillary region is 6%. A separate axillary node dissection may be considered. If lymph node involvement is present, management would be the same as that described under stage II.

TREATMENT OPTIONS

Standard

1. Either excisional biopsy or lumpectomy for lobular carcinoma in situ.
2. Segmental/wedge/partial breast resection, with or without axillary dissection for intraductal carcinoma.
3. Total mastectomy, with axillary dissection for intraductal carcinoma.

Investigational

Excisional biopsy with radiation therapy for intraductal carcinoma.

Stage I breast cancer

T1a/T1b N0/N1a M0

Five-year survival 85%, ten-year survival 70%

Stage I breast cancer is highly curable with a range of surgical procedures or combined treatment modalities. Surgical procedures which conserve a major portion of the involved breast, followed by radiation therapy, provide tumor control equivalent to more extensive surgical procedures.

Again, in these early stages (stages I or II), when clinical findings indicate the tumor to be of limited size (< 4 cm), in a favorable location (not subareolar), and if the breast is of sufficient size, a one-step procedure such as combined biopsy and lumpectomy with axillary dissection can consititute primary surgical therapy. If surgical margins and axillary nodes are free, no further surgery is required.

If the stage I patient is not considered to be a candidate for the one-step procedure, then the two-step approach (biopsy and delayed definitive operation if the specimen is positive) is encouraged. With this approach, treatment options can be discussed with the patient prior to definitive surgery.

Selection of the appropriate therapeutic approach, therefore, depends on the location and size of the lesion, breast size, and whether the patient desires to preserve the breast.
Postoperative chest wall radiation therapy after modified or total radical mastectomy should not be given routinely and should only be performed in selected patients who are known to have residual tumor in the operative field or who have a high risk of microscopic residual disease. An axillary node dissection should be performed for histologic study if modified mastectomy is not done, since approximately one third of patients with clinically negative nodes will have histologic involvement and may be candidates for additional treatment described under stage II (axillary nodes involved). Estrogen and progesterone receptor proteins should be determined for the primary tumor.

TREATMENT OPTIONS

Standard

One of the following plans, listed in the order of limited to extensive, is used for initial treatment, depending on the location and size of the lesion, breast size, and whether the patient wants to preserve the breast. The first two procedures are appropriate when negative margins can be achieved at the time of excision. If one of the first two procedures is performed, radiotherapy is used to treat the remaining breast tissue. Treatment consists of external beam radiation therapy plus an optional boost of interstitial radioactive implants, or an optional boost dose of external radiation to the primary tumor site. The primary advantage of this approach for the patient is cosmesis. Surgical and radiotherapeutic technique are extremely important in obtaining an optimal therapeutic result and satisfactory cosmesis. The availability of specialized equipment and radiotherapists with expertise using this approach should be considered in the selection of treatment.

1. Excisional biopsy/lumpectomy with separate axillary node dissection, and postoperative radiation therapy to breast (1–4)
2. Segmental/wedge/partial breast resection with axillary node dissection, and postoperative radiation therapy to breast (1–3)
3. Modified radical or total mastectomy with axillary node dissection. (1,5)

Investigational

Following surgery or limited surgery and radiotherapy, investigational protocols exploring the value of adjuvant chemotherapy for those high-risk patients with estrogen and progesterone receptor negative tumors, and hormonal therapy for patients with estrogen and progesterone receptor positive tumors should be considered.

Stage II breast cancer

T0	N1b	M0
T1a/T1b	N1b	M0
T2a/T2b	N0/N1a/N1b	M0

Five-year survival 66%, ten-year survival 25%

Stage II breast cancer is curable with a range of surgical procedures or combined treatment modalities. Conservative surgical approaches which salvage a portion of the breast, followed by postoperative radiation therapy, can provide tumor control equivalent to more extensive surgery. The diagnostic biopsy and the surgical procedure which will be used as primary treatment can be performed as one or two separate procedures, depending on the existence of parameters previously given under stage I. After the presence of a malignancy is confirmed and the histology is determined, treatment options should be discussed with the patient before a definitive therapeutic procedure is recommended. Estrogen and progesterone receptor proteins should be determined on the primary tumor.

Selection of one of the equivalent treatment options depends on the location and size of the lesion, breast size, and whether the patient wants to preserve the breast. Postoperative chest wall radiation therapy after modified radical or

total mastectomy is not given routinely and should be recommended for selected patients who are known to have residual tumor left in the operative field, or who are at high risk for microscopic residual disease. An axillary dissection should be done for histologic study if modified radical mastectomy is not done. Adjuvant chemotherapy has been found to be of value for node positive patients, especially in premenopausal women. Preliminary reports from ongoing trials suggest that the addition of hormonal therapy may be beneficial to selected subgroups of postmenopausal patients. If circumstances permit, all newly diagnosed patients with cancer of the breast should be encouraged to participate in one of the many clinical trials to evaluate new treatment and approved approaches.

TREATMENT OPTIONS

Standard

One of the following surgical procedures, listed in the order of limited to extensive, is used for initial treatment, depending on the location and size of the lesion, breast size, and whether the patient feels strongly about preservation of the breast. The first two procedures are appropriate for primary tumors less than or equal to 4 cm in size and when negative margins can be achieved at the time of excision. If one of the first two procedures is performed, radiotherapy is used to treat the remaining breast tissue. Treatment consists of external beam radiation plus an optional boost of interstitial radioactive implants (or an optional boost dose of external radiation) to the primary tumor site. The primary advantage of this approach for the patient is cosmesis. Surgical and radiotherapeutic technique are extremely important in obtaining an optimal therapeutic result and satisfactory cosmesis. The availability of specialized equipment, radiation therapists, and surgeons with expertise using this approach should be considered in the selection of treatment.

Surgical procedures include:

1. Excisional biopsy/lumpectomy with separate axillary node dissection, and postoperative radiation therapy to breast (1–4)
2. Segmental/wedge/partial breast resection with axillary node dissection, and postoperative radiation therapy to breast (1–3)
3. Modified radical or total mastectomy with axillary node dissection, (1,5)

Following the treatment used to control local disease, adjuvant chemotherapy is given to reduce the rate of recurrence and improve survival in patients with lymph node involvement. Many different drug regimens have been developed. The drug combinations listed have been tested and provide therapeutic benefit, although not all have demonstrated superiority to an untreated control group in prospective randomized trials.

1. CMF: cyclophosphamide + methotrexate + fluorouracil (6)
2. CMFVP: cyclophosphamide + methotrexate + fluorouracil + vincristine + prednisone (7)
3. L-PAM and 5-FU: melphalan + fluorouracil, for premenopausal women (8,9)
4. L-PAM, 5-FU, and tamoxifen: melphalan + fluorouracil + tamoxifen, for postmenopausal women whose tumors are estrogen/progesterone receptor positive (10)
5. CA: cyclophosphamide + doxorubicin*(11)
6. CAF: cyclophosphamide + doxorubicin* + fluorouracil (12)
7. Tamoxifen: for postmenopausal patients with receptor-positive tumors

An NIH Consensus Development Conference was held in 1985 to determine the role of adjuvant therapy in breast cancer. The conference strongly encouraged the inclusion of patients in ongoing clinical trials to improve on the results of early positive studies. In the absence of a clinical trial, they made the following recommendations for stage II breast cancer:

1. For premenopausal women regardless of hormone receptor status, treatment with established combination chemotherapy regimens should be given.
2. For postmenopausal women with positive hormone receptors, hormone therapy with tamoxifen delays recurrence and prolongs survival.
3. For postmenopausal women with negative hormone receptors, cytotoxic chemotherapy may be considered.

Investigational

Investigational protocols evaluating new types of chemotherapy and/or hormone therapy.

Stage IIIA breast cancer (operable)

T1a/T1b	N2	M0
T2a/T2b	N2	M0
T3a/T3b	N0/N1/N2	M0

Five-year survival 41%

Stage III breast cancer is further classified into operable (stage IIIA) and inoperable (locally advanced, stage IIIB) disease. Stage IIIA disease is responsive to therapy, and control of disease for long periods of time is often possible, particularly if axillary lymph nodes are pathologically negative. Treatment plans for stage IIIA breast cancer include sequential use of surgery, radiation therapy, and chemotherapy.

In stage IIIB breast cancer, surgery is generally limited to the initial biopsy. This biopsy is important to confirm the diagnosis and to obtain sufficient tissue for hormone receptor studies. Radiation therapy is used to treat the local disease, and chemotherapy is used to treat occult metastases. If a good response is achieved with the other therapies employed, surgical removal of residual tumor may be performed. With combined treatment modalities, 30%-40% of patients with stage IIIB (inflammatory or noninflammatory locally advanced breast cancer) can achieve an extended disease-free survival period in excess of five years.

Newly diagnosed patients with Stage III breast cancer should be considered candidates for one of the ongoing clinical trials to improve therapeutic results in this disease.

*The potential for doxorubicin-induced cardiotoxicity should be considered in the selection of chemotherapeutic regimens for an individual patient.

TREATMENT OPTIONS

Standard

1. One of the following surgical procedures for initial treatment:
   a. Modified radical mastectomy
   b. Radical mastectomy (rarely indicated)
2. Because of a higher risk of local recurrence for this stage, radiation therapy should be considered in the overall treatment plan, including postoperative external beam radiation to the chest wall and peripheral lymphatics as well as a boost dose to the primary tumor site or chest wall scar.
3. Chemotherapy regimens with or without hormones are given in conjunction with the above surgical procedures. Some of the effective combination chemotherapy regimens commonly used are:
   a. CMF: cyclophosphamide + methotrexate + fluorouracil (6)
   b. CAF: cyclophosphamide + doxorubicin* + fluorouracil (15)
   c. CMFP: cyclophosphamide + methotrexate + fluorouracil + prednisone (16)
   d. CMFVP: cyclophosphamide + methotrexate + fluorouracil + vincristine + prednisone (7)
   e. L-PAM and 5-FU: melphalan + fluorouracil, for premenopausal women (9)
   f. L-PAM, 5-FU and tamoxifen: melphalan + fluorouracil + tamoxifen, for postmenopausal women (14)
   g. CA: cyclophosphamide + doxorubicin* (11)

Chemotherapeutic recommendations for stage IIIA breast cancer with positive lymph nodes are essentially the same as those for stage II breast cancer. Chemotherapy should be considered in premenopausal women regardless of receptors. Hormonal therapy with tamoxifen or tamoxifen combined with chemotherapy may be considered for postmenopausal women with receptor positive tumors. Postmenopausal women with receptor negative tumors should be considered for adjuvant chemotherapy.

Investigational

Investigational protocols evaluating the role of combination chemotherapy with or without hormonal manipulation are underway. Tamoxifen as postoperative adjuvant hormonal therapy for postmenopausal patients with high levels of estrogen and progesterone receptors can be given in addition to adjuvant chemotherapy (14).

Stage IIIB breast cancer (locally advanced)

Any T	N3	M0
T4	Any N	M0

Combined modality therapy has an important role in controlling local, regional, and systemic disease. Various sequences of local and systemic therapies are under investigation, but treatment plans generally include a combination of surgery (for diagnosis or tumor size reduction), radiation therapy (either pre- or post-operative), and chemotherapy (either pre- or post-local therapy). Preoperative chemotherapy and/or radiation therapy frequently renders a previously inoperable patient one for whom mastectomy can be considered. All patients should be encouraged to participate in one of the ongoing trials in progress to improve the therapeutic results in this disease.

(The same considerations are present with stage IV disease, except that surgery is usually restricted to incisional biopsy for diagnosis.)

TREATMENT OPTIONS

Standard

1. Incisional biopsy for diagnosis and hormonal receptor protein assay. Combination chemotherapy as the first modality of treatment followed by external beam radiation therapy to the primary and regional lymph nodes is recommended. A cone down field with external beam radiation plus interstitial implants to the primary site may be considered. A "debulking" mastectomy should be considered if response to systemic therapy or radiation therapy is poor or if necessary for technical reasons to administer radiation therapy optimally.
2. Incisional biopsy for diagnosis and hormonal receptor protein assay followed by external beam radiation to the primary and to regional lymph nodes. If the response is poor, a mastectomy may be performed, if possible; and adjuvant combination chemotherapy or hormonal therapy is recommended.
3. In patients with T4, N0-N1, M0 tumors that are technically operable, a total mastectomy with axillary dissection and postoperative radiation therapy may be considered. This treatment should be followed by adjuvant combination chemotherapy and/or hormone treatment.
4. Chemotherapy regimens commonly utilized include:
   a. CMF: cyclophosphamide + methotrexate + fluorouracil (6)
   b. CAF: cyclophosphamide + doxorubicin* + fluorouracil (15)
   c. CMFP: cyclophosphamide + methotrexate + fluorouracil + prednisone (16)
   d. CMFVP: cyclophosphamide + methotrexate + fluorouracil + vincristine + prednisone (7)
   e. CA: cyclophosphamide + doxorubicin* (11)

Initial chemotherapy should be given for a total of three to six cycles or until maximal tumor reduction has been obtained. At that point, local therapy with radiation and surgery should be performed. Following local therapy, additional chemotherapy should be administered.

If combination chemotherapy is contraindicated, postmenopausal patients with tumor positive for estrogen and progesterone receptor proteins should receive tamoxifen after the surgery and radiation therapy (described under Treatment Option 1) is completed (17).

Investigational

1. Studies combining hormone therapy and combination chemotherapy followed by surgery and/or radiation therapy have also been utilized.

*The potential for doxorubicin-induced cardiotoxicity should be considered in the selection of chemotherapeutic regimens for an individual patient.

2. Intra-arterial infusion of combination chemotherapy followed by surgery and/or radiation therapy.
3. Phase II studies evaluating newly developed chemotherapeutic or hormonal or biologic agents may also be considered for patients whose local disease is not controllable by the standard measures described above.

Stage IV breast cancer (inflammatory or distant metastatic disease)

Any T Any N M1
Five-year survival 10%

Stage IV breast cancer is often responsive to treatment with durable complete remissions attainable in 10%-20% of patients, although long-term disease-free survival compatible with cure is rare. Surgical procedures are generally limited to those that will permit the determination of histology and estrogen and progesterone receptor levels. Control of local disease can be achieved with either surgery or radiotherapy. External beam radiation also has a major role in the palliation of symptoms, particularly pain caused by bone metastases. All patients with stage IV breast cancer should be considered candidates for one of the ongoing clinical trials in progress to improve therapeutic results in this disease.

TREATMENT OPTIONS

Standard

1. A surgical biopsy to determine histology and estrogen and progesterone receptor levels is recommended.
2. If extensive, life-threatening visceral disease (including lymphangitic lung metastasis, extensive liver metastasis, or brain metastasis) is *absent* and estrogen and/or progesterone receptor status is positive, hormonal therapy is an excellent first-line treatment. Patients responding to first-line hormonal therapy should be considered for sequential (second-, third-line, etc) hormone therapy until they prove refractory to this approach. One of the following approaches can be used:
   a. Ovariectomy in premenopausal patients
   b. Tamoxifen in premenopausal patients
   c. Tamoxifen in postmenopausal patients
   d. Progestational agents in postmenopausal patients
   e. Aminoglutethimide in postmenopausal patients
   f. Hypophysectomy and surgical adrenalectomy: The availability of antiestrogens and medical adrenalectomy with aminoglutethimide has made these major endocrine ablative procedures obsolete and unnecessary.
3. If extensive visceral disease is present or estrogen and progesterone receptor status is negative, one of the chemotherapy regimens may be used:
   a. CMF: cyclophosphamide + methotrexate + fluorouracil (16)
   b. CAF: cyclophosphamide + doxorubicin* + fluorouracil (18)
   c. CMFP: cyclophosphamide + methotrexate + fluorouracil + prednisone (16)
   d. CMFVP: cyclophosphamide + methotrexate + fluorouracil + vincristine + prednisone (18)
   e. CA: cyclophosphamide + doxorubicin* (19)

Investigational

Phase II studies evaluating newly developed chemotherapeutic agents or biologicals, or studies of new treatment strategies, should be considered.

Treatment of local-regional recurrence

This section deals with recurrent disease in the chest wall area or in the peripheral lymphatics.

Local-regional recurrence of breast cancer is often responsive to therapy, and chances for local-regional control are favorable. Combinations of surgery, radiation therapy, hormone therapy, and chemotherapy are often used for control of recurrent breast cancer. A biopsy for histological confirmation and for assessment of estrogen and progesterone receptor proteins is recommended at the time of recurrence. This information is helpful in selecting the appropriate treatment modalities. Local recurrence is usually the harbinger of widespread disease; but in a small subset of patients, surgery and/or radiation therapy may be curative, though infrequently. All patients with recurrent breast cancer should be considered candidates for one of the ongoing clinical trials testing combined modality treatment strategies.

TREATMENT OPTIONS

Standard

1. If distant metastases are absent and surgical resection is possible, then a wide excision followed by radiation therapy would be the treatment of choice.

   Adjuvant hormonal therapy or combination chemotherapy, preferably in the context of a clinical trial, should be considered.
2. If the lesion is unresectable, radiation is the treatment of choice.

   Adjuvant hormonal therapy or combination chemotherapy, preferably in the context of a clinical trial, should be considered.
3. If local-regional recurrence is too extensive to expect appropriate control with radiation therapy, then hormonal therapy for estrogen receptor positive tumor or chemotherapy for all other tumors would be the treatment of choice. Local consolidation with radiation therapy is appropriate for patients who respond to systemic treatment and achieve a substantial reduction in tumor mass.
4. Patients with local-regional disease and distant metastases should be treated with hormone therapy (if the tumor is hormone receptor positive) or combination chemotherapy. In patients who respond to systemic treatment, radiation therapy can be used at the time maximum response to systemic therapy is achieved.
5. Hormonal alternatives:
   Tamoxifen
   Megestrol acetate
   Estrogens

* The potential for doxorubicin-induced cardiotoxicity should be considered in the selection of chemotherapeutic regimens for an individual patient.

Oophorectomy

6. Combination chemotherapy:
   a. CMF: cyclophosphamide + methotrexate + fluorouracil (16)
   b. CAF: cyclophosphamide + doxorubicin* + fluorouracil (18)
   c. CMFP: cyclophosphamide + methotrexate + fluorouracil + prednisone (16)
   d. CMFVP: cyclophosphamide + methotrexate + fluorouracil + vincristine + prednisone (18)
   e. CA: cyclophosphamide + doxorubicin* (19)

Investigational

Current investigational modalities include regional hyperthermia with or without radiation therapy for bulky local recurrences in the absence of distant metastases. Intra-arterial chemotherapy (with various cytotoxic agents) can be considered in patients with bulky local recurrence that is unresectable and refractory to radiation therapy and standard systemic therapies.

FOLLOW-UP

Follow-up includes a complete history and thorough physical examination of the patient. The intensity of follow-up is determined by the initial stage of the disease. Following therapy of the primary tumor, the breast cancer patient should have a mammogram at least once yearly, plus periodic physical examinations at intervals of three to six months, as well as serum alkaline phosphatase and transaminase determinations (an inexpensive screening test for bone or liver metastases). If the serum alkaline phosphatase (bone fractionation) is elevated, a bone scan is helpful in detecting asymptomatic lesions. Positive areas on the bone scan should be examined by radiographs to find lytic lesions that might pose a threat of pathologic fracture. If found, these might benefit from radiation therapy, usually with orthopedic stabilization in long bones.

A chest x-ray done at 12-month intervals is helpful in detecting asymptomatic lesions.

Long-term follow-up evaluation of the patient following breast cancer therapy must be carried out regularly and diligently.

Scans and other examinations should be performed as indicated from history and physical examination.

DRUG THERAPY FOR SEVERE CHRONIC PAIN IN CANCER

Treatment of pain—mild or severe, acute or chronic—is a major component of caring for patients with cancer.

Acute pain is relatively easy to treat; it sharpens and then lessens. Mild pain is also relatively easy to treat.

Perhaps the most difficult pain to treat is the severe chronic pain of terminal illness. Many of the analgesic agents that are effective against severe pain often have side effects and other complications. Chronic pain contributes to serious emotional and behavioral changes, such as depression and insomnia, which themselves require treatment.

The goal of therapy for severe chronic pain in terminal illness is to make the patient relatively pain-free. Oral administration on a regular basis of narcotic agents such as morphine or methadone will provide most terminally ill patients with relief from severe chronic pain and from fear of that pain recurring.

Some patients, especially those with episodic pain, do better when narcotics are given on an "as needed" basis. Physicians must remain flexible in treating the severe chronic pain in terminal illness, adjusting administration dosage, route and frequency to the needs of the patient. Although fear of patients becoming dependent on narcotics has limited the effective use of morphine and other narcotic drugs, such fear is unfounded, because dependence is of little consequence in the context of terminal illness.

CARCINOMA OF THE BREAST IN MEN

Breast cancer occurs infrequently in men and accounts for less than 1% of the total incidence for the disease.

The average age at diagnosis is ten years older than for female breast cancer. Its development appears to be associated with conditions that cause hyperestrogenism.

On pathological examination, the tumor generally resembles carcinoma of the breast in women. Estrogen receptors are reported in as many as 84% of the specimens seen.

Management is, therefore, very similar to the management of breast cancer in women and employs essentially the same treatment considerations. A mastectomy should be performed with the same assays to determine appropriate adjuvant therapy. There is often a high response rate to hormonal therapy.

The prognosis appears to be comparable to that of female breast cancer within each stage. Metastatic patterns and locoregional recurrence patterns, again, are similar.

PREPUBERTAL BREAST CANCER

Prepubertal breast cancer is rare. Most of the nodules occurring in this age group are benign.

The most frequent histologic type of breast carcinoma in children and adolescents is secretory carcinoma.

Psychological factors must be strongly considered when deciding on biopsies and management. Excision biopsy of breast lumps in premenarchal girls should be avoided for fear of destroying or removing the breast bud, resulting in later aplasia of the breast. If anything, an aspiration biopsy may be considered.

REFERENCES

Treatment overview

1. Veronesi U, Saccozzi R, Del Vecchio M, et al: Comparing radical mastectomy with quadrantectomy, axillary dissection, and radiotherapy in patients with small cancers of the breast. N Engl J Med 305(1):6–11, 1981.
2. Levene MB, Harris JR, Hellman S: Treatment of carcinoma of the breast by radiation therapy. Cancer 39(6):2840–2845, 1977.
3. Romsdahl MM, Montague ED, Ames FC, et al: Conservation surgery

*The potential for doxorubicin-induced cardiotoxicity should be considered in the selection of chemotherapeutic regimens for an individual patient.

and irradiation as treatment for early breast cancer. Arch Surg 118(5):521–526, 1983.
4. Fisher B, Bauer M, Margolese R, et al: Five-year results of a randomized clinical trial comparing total mastectomy and segmental mastectomy with or without radiation in the treatment of breast cancer. N Engl J Med 312 (12):665–673, 1985.
5. Fisher B, Redmond C, Fisher ER, et al: Ten-year results of a randomized clinical trial comparing radical mastectomy and total mastectomy with or without radiation. N Engl J Med 312(11):674, 1985.
6. Tancini G, Bonadonna G, Valagussa P, et al: Adjuvant CMF in breast cancer: comparative 5-year results of 12 versus 6 cycles. J Clin Oncol 1(1):2–10, 1983.
7. Glucksberg H, Rivkin SE, Rasmussen S, et al: Combination chemotherapy (CMFVP) versus L-phenylalanine mustard (L-PAM) for operable breast cancer with positive axillary nodes: a Southwest Oncology Group study. Cancer 50(3):423–434, 1982.
8. Fisher ER, Redmond C, Fisher B: Pathologic findings from the National Surgical Adjuvant Breast Project: VIII. Relationship of chemotherapeutic responsiveness to tumor differentiation. Cancer 51(2):181–191, 1983.
9. Fisher B, Glass A, Redmond C, et al: L-Phenylalanine mustard (L-PAM) in the managment of primary breast cancer: an update of earlier findings and a comparison with those utilizing L-PAM plus 5-Fluorouracil (5-FU). Cancer 39(suppl 6):2883–2903, 1977.
10. Fisher B, Redmond C, Brown A, et al: Influence of tumor estrogen and progesterone receptor levels on the response to tamoxifen and chemotherapy in primary breast cancer. J Clin Oncol 1(4):227–241, 1983.
11. Jones SE, Salmon SE, Allen H, et al: Adjuvant treatment of node-positive breast cancer with Adriamycin-cyclophosphamide with or without radiation therapy: interim results of an ongoing clinical trial. Recent Results Cancer Res 80:162–169, 1982.
12. Buzdar AU, Gutterman JU, Blumenschein GR, et al: Intensive postoperative chemo-immunotherapy for patients with Stage II and III breast cancer. Cancer 41:1064–1075, 1978.
13. Fisher B, Redmond C, Fisher ER, et al: A summary of findings from NSABP: trials of adjuvant therapy, in Jones SE, Salmon SE (eds): Adjuvant Therapy of Cancer IV. New York, Grune and Stratton Inc, 1984, pp 185–194.
14. Fisher B, Redmond C, Brown A, et al: Adjuvant chemotherapy with and without tamoxifen in the treatment of primary breast cancer: 5-year results from the National Surgical Adjuvant Breast and Bowel Project Trial. J Clin Oncol 4:459–471, 1986.
15. Hortobagyi G, Blumenschein GR, Spanos W, et al: Multimodal treatment of locoregionally advanced breast cancer. Cancer 51(5):763–768, 1983.
16. Tormey DC, Gelman R, Band PR, et al: Comparison of induction chemotherapies for metastatic breast cancer: an Eastern Cooperative Oncology Group Trial. Cancer 50(7):1235–1244, 1982.
17. Fisher B, Redmond C, Brown A, et al: Analysis at six years by Nolvadex Adjuvant Trial Organization: controlled trial of tamoxifen as single adjuvant agent in management of early breast cancer. Lancet 8433:836–839, 1985.
18. Smalley RV, Lefante J, Bartolucci A, et al: A comparison of cyclophosphamide, Adriamycin, and 5-fluorouracil (CAF) and cyclophosphamide, methotrexate, 5-fluorouracil, vincristine and prednisone (CMFVP) in patients with advanced breast cancer: a Southeastern Cancer Study Group project. Breast Cancer Res Treat 3(2): 209–220, 1983.
19. Tranum BL, McDonald B, Thigpen T, et al: Adriamycin combinations in advanced breast cancer: a Southwest Oncology Group Study. Cancer 49(5):835–839, 1982.

BIBLIOGRAPHY

Diagnosis

Keys HM, Bakemeier RF, Savlov E: Breast cancer, in Rubin P (ed): Clinical Oncology: A Multidisciplinary Approach, ed 6. Rochester, NY, American Cancer Society, 1983, pp 120–140.

Fisher B: Reappraisal of breast biopsy prompted by the use of lumpectomy: surgical strategy. JAMA 253(24):3585–3589, 1985.

Stage information

American Joint Committee on Cancer: Breast, in Beahrs OH, Myers MH (eds): Manual for Staging of Cancer, ed 2. Philadelphia, J B Lippincott Co, 1983, pp 127–133.

Harris JR, Canellos GP, Hellman S, et al: Cancer of the breast—staging, in De Vita VT, Hellman S, Rosenbert SA (eds): Cancer—Principles and Practice of Oncology, ed 2. Philadelphia, J B Lippincott Co, vol 2, 1985, pp 1127–1129.

Kalamazoo Community Hospital Oncology Program: Breast cancer, in Patient Management Guidelines. 1982, pp 13–14.

Keys HM, Bakemeier RF, Savlov E: Breast cancer, in Rubin P (ed): Clinical Oncology: A Multidisciplinary Approach, ed 6. Rochester, NY, American Cancer Society, 1983, pp 120–140.

Treatment overview

Buzdar AU, Gutterman JU, Blumenschein GR, et al: Intensive postoperative chemo-immunotherapy for patients with Stage II and III breast cancer. Cancer 41:1064–1075, 1978.

Calle R, Pilleron JP, Vilcoq JR, et al: Breast carcinoma: experience of the Curie Institute, in Ames FR, Blumenschein GR, Montague ED (eds): Current Controversies in Breast Cancer. Austin, Tex, The University of Texas Press, 1984, pp 121–134.

Fisher B, Bauer M, Margolese R, et al: Five-year results of a randomized clinical trial comparing total mastectomy and segmental mastectomy with or without radiation in the treatment of breast cancer. N Engl J Med 312(12):665–673, 1985.

Fisher B, Glass A, Redmond C, et al: L-Phenylalanine mustard (L-PAM) in the managment of primary breast cancer: an update of earlier findings and a comparison with those utilizing L-PAM plus 5-Fluorouracil (5-FU). Cancer 39(suppl 6):2883–2903, 1977.

Fisher B, Redmond C, Brown A, et al: Adjuvant chemotherapy with and without tamoxifen in the treatment of primary breast cancer: 5-year results from the National Surgical Adjuvant Breast and Bowel Project Trial. J Clin Oncol 4:459–471, 1986.

Fisher B, Redmond C, Brown A, et al: Analysis at six years by Nolvadex Adjuvant Trial Organization: controlled trial of tamoxifen as single adjuvant agent in management of early breast cancer. Lancet 8433:836–839, 1985.

Fisher B, Redmond C, Brown A, et al: Influence of tumor estrogen and progesterone receptor levels on the response to tamoxifen and chemotherapy in primary breast cancer. J Clin Oncol 1(4):227–241, 1983.

Fisher B, Redmond C, Fisher ER, et al: Ten-year results of a randomized clinical trial comparing radical mastectomy and total mastectomy with or without radiation. N Engl J Med 312(11):674, 1985.

Fisher B, Redmond C, Fisher ER, et al: A summary of findings from NSABP: trials of adjuvant therapy, in Jones SE, Salmon SE (eds): Adjuvant Therapy of Cancer IV. New York, Grune and Stratton Inc, 1984, pp 185–194.

Fisher ER, Redmond C, Fisher B: Pathologic findings from the National Surgical Adjuvant Breast Project: VIII. Relationship of chemotherapeutic responsiveness to tumor differentiation. Cancer 51(2): 181–191, 1983.

Glucksberg H, Rivkin SE, Rasmussen S, et al: Combination chemotherapy (CMFVP) versus L-phenylalanine mustard (L-PAM) for

operable breast cancer with positive axillary nodes: a Southwest Oncology Group study. Cancer 50(3):423–434, 1982.
Harris JR, Hellman S: The treatment philosophy, technique, and results of primary radiation for early breast cancer at the Joint Center for Radiation Therapy, in Ames FR, Blumenschein GR, Montague ED (eds): Current Controversies in Breast Cancer. Austin, Tex, The University of Texas Press, 1984, pp 111–119.
Hortobagyi G, Blumenschein GR, Spanos W, et al: Multimodal treatment of locoregionally advanced breast cancer. Cancer 51(5): 763–768, 1983.
Jones SE, Salmon SE, Allen H, et al: Adjuvant treatment of node-positive breast cancer with Adriamycin-cyclophosphamide with or without radiation therapy: interim results of an ongoing clinical trial. Recent Results Cancer Res 80:162–169, 1982.
Levene MB, Harris JR, Hellman S: Treatment of carcinoma of the breast by radiation therapy. Cancer 39(6):2840–2845, 1977.
Montague ED: Conservation surgery and radiation therapy in the treatment of operable breast cancer. Cancer 53:700–704, 1984.
Pierquin B, Owen R, Maylin C, et al: Radical radiation therapy on breast cancer. Int J Radiat Oncol Biol Phys 6:17–24, 1979.
Romsdahl MM, Montague ED, Ames FC, et al: Conservation surgery and irradiation as treatment for early breast cancer. Arch Surg 118(5):521–526, 1983.
Smalley RV, Lefante J, Bartolucci A, et al: A comparison of cyclophosphamide, Adriamycin, and 5-fluorouracil (CAF) and cyclophosphamide, methotrexate, 5-fluorouracil, vincristine and prednisone (CMFVP) in patients with advanced breast cancer: a Southeastern Cancer Study Group project. Breast Cancer Res Treat 3(2):209–220, 1983.
Tancini G, Bonadonna G, Valagussa P, et al: Adjuvant CMF in breast cancer: comparative 5-year results of 12 versus 6 cycles. J Clin Oncol 1(1):2–10, 1983.
Tormey DC, Gelman R, Band PR, et al: Comparison of induction chemotherapies for metastatic breast cancer: an Eastern Cooperative Oncology Group Trial. Cancer 50(7):1235–1244, 1982.
Tranum BL, McDonald B, Thigpen T, et al: Adriamycin combinations in advanced breast cancer: a Southwest Oncology Group Study. Cancer 49(5):835–839, 1982.
Veronesi U, Saccozzi R, Del Vecchio M, et al: Comparing radical mastectomy with quadrantectomy, axillary dissection, and radiotherapy in patients with small cancers of the breast. N Engl J Med 305(1):6–11, 1981.

Drug therapy for severe chronic pain in cancer

Dautr L, Cleeland CS: The prevalence and severity of pain in cancer. Cancer 50:1913–1918, 1982.
McGivney WT, Crookes GM: The care of patients with severe chronic pain in terminal illness. JAMA 251:1182–1188, 1984.

GENERAL REFERENCES

The following materials were provided to all workgroup members for general reference and, in some instances, to serve as models for development of guidelines.

Specific clinical references and bibliographies are included with each report.

De Vita VT, Hellman S, Rosenberg SA (eds): Cancer: Principles and Practice of Oncology. Philadelphia, J.B. Lippincott, 1982.

National Cancer Institute: Physicians Data Query Cancer Information (PDQC) Database. Bethesda, MD, 1985.

National Cancer Institute: Community Hospital Oncology Program. Southern Tier Regional Cancer Program, Binghamton, NY; Kalamazoo Community Hospital Oncology Program, Kalamazoo, MI; Toledo Community Hospital Oncology Program, Toledo, OH; Brooklyn Community Hospital Oncology Program, Brooklyn, NY, 1981.

National Library of Medicine: The MEDLINE Database. Bethesda, MD, 1985.

CONTRIBUTORS

Jack B. Alperin, MD, Hematologist/Oncologist, The University of Texas Medical Branch, Galveston

Ralph J. Anderson, MD, Oncologist, Obstetrician/Gynecologist, Texas Tech University School of Medicine, Lubbock

William A. Anthony, MD, Urologist, Amarillo

Robert E. Askew, MD, General Surgeon, Austin

Odis Lynn Avant, MD, Urologist, Lubbock

John C. Bagwell, MD, Hematologist/Oncologist, Dallas

H. Randolph Bailey, MD, Colon and Rectal Surgeon, Houston

Jerry L. Barker, MD, Therapeutic Radiologist, Dallas

James A. Belli, MD, Therapeutic Radiologist, The University of Texas Medical Branch, Galveston

William Paul Bowman, MD, Pediatric Oncologist, Cook Children's Hospital, Fort Worth

Howard A. Britton, MD, Pediatric Oncologist, San Antonio

George R. Brown, MD, Radiologist, Allan Shivers Radiation Therapy Center, Austin

George R. Buchanan, MD, Pediatric Oncologist, The University of Texas Health Science Center, Dallas

Patricia A. Buffler, PhD, Epidemiologist, The University of Texas School of Public Health, Houston

Peter C. Canizaro, MD, General Surgeon, Texas Tech University School of Medicine, Lubbock

Charles V. Capen, MD, Oncologist, Obstetrician/Gynecologist, Scott and White Clinic, Temple

Robert P. Carter, Jr, MD, Obstetrician/Gynecologist, Odessa

Claude Y. Chong, MD, Radiologist, El Paso

Lanny G. Close, MD, Otorhinolaryngologist, Dallas

J. Stanley Conner, MD, Obstetrician/Gynecologist, Houston

Wickliffe Pickett Curtis, MD, Urologist, El Paso

William J. deGroot, MD, Internist, Pulmonary Specialist, The University of Texas Medical Branch, Galveston

Luis Delclos, MD, Therapeutic Radiologist, UT M.D. Anderson Hospital, Houston

Charles R. Denham, MD, Oncologist, Austin

Aly H. El-Domeiri, MD, Oncologist, Lubbock

Daniel E. Epley, MD, Radiologist/Oncologist, Amarillo

Patrick C. Farley, MD, Internist, Texas Tech University, El Paso

Donald Joseph Fernbach, MD, Pediatric Oncologist, Hematologist/Oncologist, Texas Children's Hospital, Houston

John M. Ferrell, Jr, MD, Urologist, Longview

Stanton P. Fischer, MD, Internist, Pulmonary Specialist, Kelsey-Seybold Clinic, Houston

Eugene P. Frenkel, MD, Internist, The University of Texas Health Science Center, Dallas

H. Stephen Gallager, MD, Pathologist, UT M.D. Anderson Hospital, Houston

Frank H. Gardner, MD, Hematologist/Oncologist, The University of Texas Medical Branch, Galveston

Helmuth Goepfert, MD, Head and Neck Surgeon, UT M.D. Anderson Hospital, Houston

William Gordon, Jr, MD, Therapeutic Radiology, The University of Texas Medical Branch, Galveston

Jacob B. Green III, MD, Hematologist/Oncologist, Scott and White Clinic, Temple

Frederick L. Grover, MD, Cardiovascular and Thoracic Surgeon, The University of Texas Health Science Center, San Antonio

Mary Ellen Haggard, MD, Pediatric Oncologist, The University of Texas Medical Branch, Galveston

John F. Helfrick, DDS, Oral and Maxillofacial Surgeon, The University of Texas Dental School, Houston

W. Ki Hong, MD, Oncologist, UT M.D. Anderson Hospital, Houston

Gabriel N. Hortobagyi, MD, Oncologist, UT M.D. Anderson Hospital, Houston

Gerald T. Keegan, MD, Urologist, Scott and White Clinic, Temple

Joseph S. Lancaster, MD, Obstetrician/Gynecologist, Austin

Frank L. Lanza, MD, Gastroenterologist, Houston

Daniel E. Lehane, MD, Oncologist, Houston

John M. Lukeman, MD, Pathologist, UT M.D. Anderson Hospital, Houston

Fred M. Massey, MD, Gynecologist/Oncologist, San Antonio

Joseph Dean McCracken, MD, Oncologist, San Antonio

Theodore R. McMillin, Jr, MD, Urologist, Harlingen

Eleanor D. Montague, MD, Therapeutic Radiologist, UT M.D. Anderson Hospital, Houston

Clifton F. Mountain, MD, Thoracic Surgeon, UT M.D. Anderson Hospital, Houston

Judy K. Mullins, MD, Pediatric Hematologist, Driscoll Hospital, Corpus Christi

Robert E. Myers, MD, Pediatrician, Scott and White Clinic, Temple

George David Neal, MD, Otorhinolaryngologist, Head and Neck Surgeon, The University of Texas Health Science Center, San Antonio

Louis Eaton Neff, MD, General Surgeon, Houston

Ted M. Nicklaus, MD, Internist, Amarillo

John C. O'Brien, Jr, MD, General Surgeon, Dallas

J. Patrick O'Leary, MD, General Surgeon, Baylor University Medical Center, Dallas

C. Kent Osborne, MD, Oncologist, The University of Texas Health Science Center, San Antonio

Paul C. Peters, MD, Urologist, The University of Texas Health Science Center, Dallas

George J. Race, MD, PhD, Pathologist, The University of Texas Health Science Center, Dallas

John R. Redman, MD, Hematologist, UT M.D. Anderson Hospital, Houston

Tyvin A. Rich, MD, Radiologist, UT M.D. Anderson Hospital, Houston

G. David Roodman, MD, Internist, The University of Texas Health Science Center, San Antonio

Robert J. Salem, MD, General Surgeon, Lubbock

Michael Sarosdy, MD, Urologist, The University of Texas Health Science Center, San Antonio

Edwin D. Savlov, MD, General Surgeon, Texas Tech RAHC, Amarillo

H. Irving Schweppe, Jr, MD, Internist, St Luke's Hospital, Houston

Wayne H. Schwesinger, MD, General Surgeon, Audie Murphy Veterans Administration Hospital, San Antonio

Noel Bonham Searle, MD, Gastroenterologist, Harlingen

David A. Sears, MD, Internist, Baylor College of Medicine, Houston

John J. Senyszyn, MD, Radiation Oncologist, El Paso

Robert M. Steckler, MD, General Surgeon, Dallas

C. Porter Storey, Jr, MD, Internist, New Age Hospice, Houston

John Robert Stroehlein, MD, Internist, Methodist Hospital, Houston

Jerry James Swaney, MD, Pediatric Oncologist, El Paso

David A. Swanson, MD, Urologist, UT M.D. Anderson Hospital, Houston

Courtney M. Townsend, Jr, MD, General Surgeon, The University of Texas Medical Branch, Galveston

Arthur A. Trowbridge, Jr, MD, Hematologist/Oncologist, Scott and White Clinic, Temple

Jan van Eys, MD, PhD, Pediatric Oncologist, UT M.D. Anderson Hospital, Houston

Dan Von Hoff, MD, Therapy and Research Foundation of South Texas, San Antonio

Michael M. Warren, MD, Urologist, The University of Texas Medical Branch, Galveston

Geoffrey R. Weiss, MD, Internist, The University of Texas Health Science Center, San Antonio

Dennis E. Welch, MD, Internist, Austin

Ralph Frederick Wells, MD, Internist, Gastroenterologist, San Antonio

Gunar K. Zagars, MD, Radiologist, UT M.D. Anderson Hospital, Houston

Joseph A. Zavaletta, MD, Obstetrician/Gynecologist, Brownsville

Texas Medicine

OCTOBER 1987

CURRENT
AREA

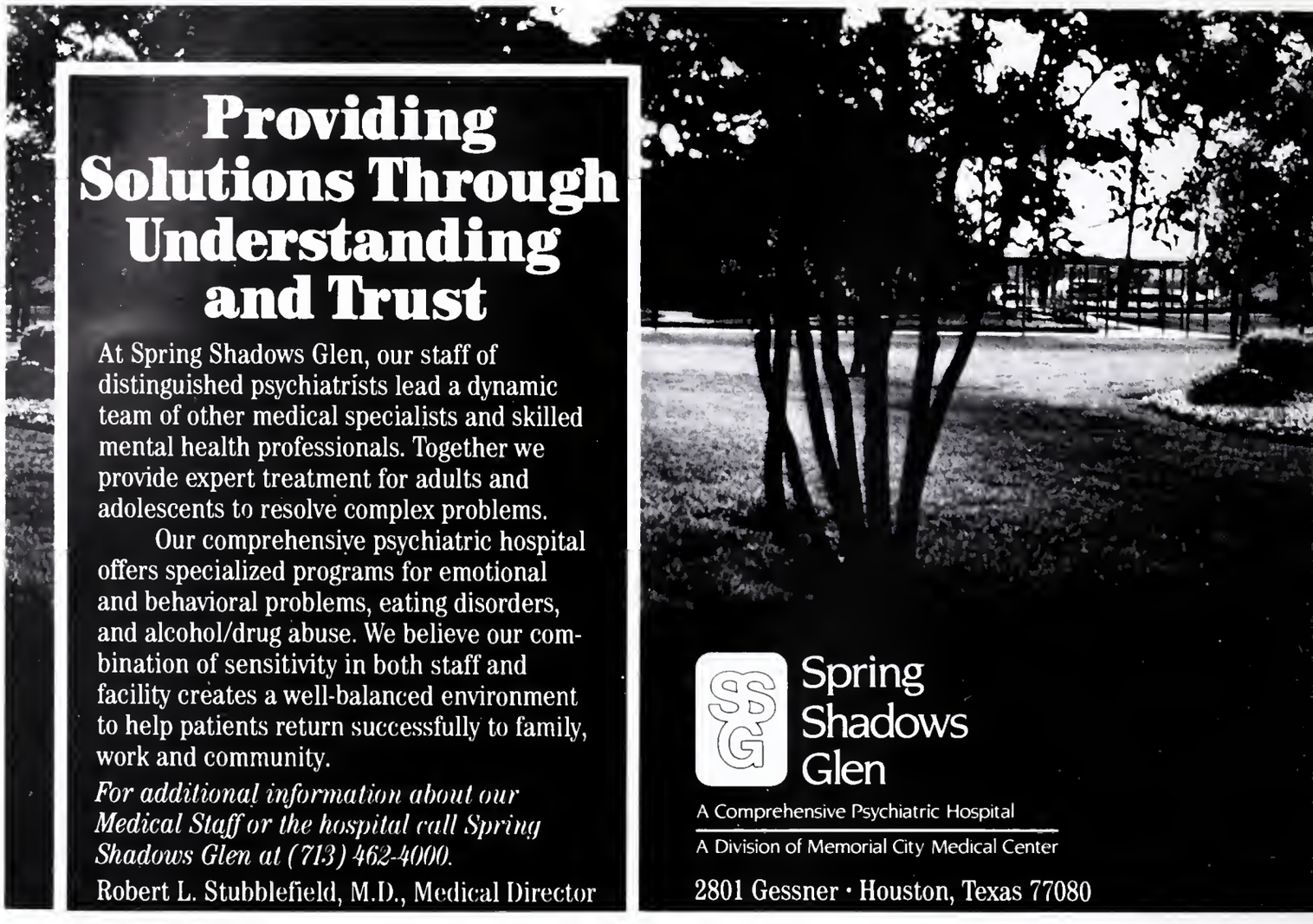
30 Obstructive sleep apnea
34 Spontaneous rupture of distal esophagus
51 Senator Bentsen on catastrophic coverage
55 New organ donation, transplantation laws

5, 23 Child sexual abuse

Texas medicine
UCSF LIBRARY
Received on: 10-14-87

UCSF LIBRARY
SERIALS DEPARTMENT
257 MEDICAL SCIENCES BUILDING
SAN FRANCISCO CA 94143

****



Providing Solutions Through Understanding and Trust

At Spring Shadows Glen, our staff of distinguished psychiatrists lead a dynamic team of other medical specialists and skilled mental health professionals. Together we provide expert treatment for adults and adolescents to resolve complex problems.

Our comprehensive psychiatric hospital offers specialized programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. We believe our combination of sensitivity in both staff and facility creates a well-balanced environment to help patients return successfully to family, work and community.

For additional information about our Medical Staff or the hospital call Spring Shadows Glen at (713) 462-4000.

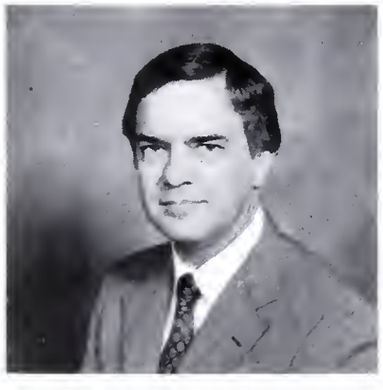
Robert L. Stubblefield, M.D., Medical Director

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner · Houston, Texas 77080



MICHAEL R. SHARP ATTORNEY

REPRESENTATION IN MATTERS OF PROFESSIONAL LICENSURE BEFORE THE TEXAS STATE BOARD OF MEDICAL EXAMINERS

SHARP, TACKETT & DAVIDSON,
A PROFESSIONAL CORPORATION
1680 One American Center • Austin, Texas 78701 • (512) 473-2265

Not certified by the Texas Board of Legal Specialization.
Certification is not currently available to anyone in this legal area.

See the difference in the first week[1]

- **Sleep improvement in 74% of patients after first h.s. dose[2]**
- **Significantly faster relief–62% of total four-week improvement evident in first week versus 44% with amitriptyline alone[1]**
- **Dramatic first-week reduction in somatic complaints[2]**

% Reduction in Somatic Symptoms[2]

- **Only ⅓ the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar[1]**

Coution potients about the combined effects of Limbitrol with olcohol or other CNS depressonts ond obout octivities requiring complete mentol olertness, such os operoting mochinery or driving o cor. In generol, limit dosoge to the lowest effective omount in elderly potients.

Protect your decision.
Write "Do not substitute."

In moderate depression and anxiety

Limbitrol®

Each tablet contains 5 mg chlordiozepoxide and 12.5 mg omitriptyline (as the hydrochloride solt) (IV)

Limbitrol® DS

Eoch toblet contains 10 mg chlordiazepoxide ond 25 mg amitriptyline (os the hydrochloride salt) (IV)

Copyright ©1987 by Roche Products Inc. All rights reserved.

References: 1. Feighner JP, *et al. Psychopharmacology 61* 217-225, Mar 22, 1979 **2.** Oata on file, Hoffmann-La Roche Inc , Nutley, NJ

Limbitrol® (IV)
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, o summory of which follows:
Indications: Reliet of moderate lo severe depression associoted with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiozepines or tricyclic ontidepressonts Do not use with monoomine oxidose (MAO) inhibitors or within 14 days following discontinuotion of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths hove occurred with concomitant use, then initiote cautiously, groduolly increasing dosoge until optimal response is ochieved Contraindicated during acute recovery phase following myocordial infarction.
Wornings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients toking tricyclic antidepressonts ond anticholinergic-type drugs Closely supervise cardiovasculor patients (Arrhythmias, sinus tochycardia and prolongation of conduction time reparted with use of tricyclic ontidepressants, especially high doses. Myocordial infarction and stroke reported with use of this class of drugs.) Caution potients about possible combined effects with alcohol and other CNS depressants and ogainst hazardous occupations requiring complete mental alertness (e *g* , operating machinery, driving).

***Usage in Pregnancy:* Use of minor tronquilizers during the first trimester should olmost olways be avoided becouse of increosed risk of congenitol molformotions os suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise potients to discuss therapy if they intend to or do become pregnant.**

Since physicol and psychological dependence to chlordiazepaxide have been reported rorely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosoge; withdrawal symptoms following discontinuation of either component alone hove been reported (nauseo, heodoche and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturole withdrowal for chlordiazepoxide)
Precoutions: Use with coution in patients with o history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit eosy access to large quantities in these patients Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives When tricyclic antidepressants ore used concomitantly with cimetidine (Tagomet), clinicolly signiticont effects have been reported involving deloyed eliminotion and increasing steody state concentrations of the tricyclic drugs Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedotive effects may be oddilive Discontinue several days before surgery Limit concomitant administration of ECT to essentiol treatment See Warnings for precautions obaut pregnoncy Limbitrol should not be taken during the nursing period Not recommended in children under 12 In the elderly and debilitated, limit to smollest effective dosoge to preclude ataxia, oversedation, confusion or anticholinergic effects
Adverse Reactions: Most frequently reported are those associated with either component alone. drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactians include vivid dreams, impotence, tremor, confusion and nosal congestion Many depressive symptoms including anorexia, fatigue, weakness, restlessness ond lethargy have been reported as side effects of both Limbitrol and amitriptyline Gronulocytopenia, jaundice and hepatic dysfunction have been observed rarely
The following list includes adverse reactions not reported with Limbitrol but requiring consideration becouse they have been reported with one or both components or closely related drugs
Cordiovosculor Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke
Psychiotric Euphoria, opprehension, poor concentration, delusions, hallucinations, hypomonio and increased or decreased libido
Neurologic Incoordination, ataxia, numbness, tingling and poresthesias of the extremities, extrapyramidol symptoms, syncope, changes in EEG patterns
Anticholinergic Disturbance of accommodation, paralytic ileus, urinary retention, dilotation of urinory tract.
Allergic Skin rash, urticoria, photosensitization, edema of face and tongue, pruritus
Hemolologic Bone marrow depression including agranulocytosis, eosinophilio, purpura, thrombocytopenia
Gostrointestinol Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue
Endocrine Testicular swelling and gynecomastio in the male, breast enlargement, galactorrhea and minor menstruol irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion
Other Headache, weight gain or loss, increased perspiration, urinory frequency, mydriasis, jaundice, alopecia, parotid swelling
Overdosage: Immediately hospitalize patient suspected of having taken an overdose Treatment is symptomatic and supportive IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment
Dosage: Individualize according to symptom severity and patient response Reduce to smallest effective dosage when satisfactory response is obtained Larger portion of daily dose may be taken at bedtime Single *h s* dose may suffice for some patients Lower dosages are recommended for the elderly Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses
How Supplied: *Double strength (DS) Tablets*, white, film-cooted, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (os the hydrochloride salt), and *Tablets*, blue, film-cooted, each containing 5 mg chlordiazepoxide ond 12 5 mg amitriptyline (as the hydrochloride salt) Available in bottles of 100 and 500, Tel-E-Dose™ packages of 100, Prescription Paks of 50

ROCHE®
ROCHE PROOUCTS INC
Manoti, Puerto Rico 00701

PI 058S

The rewards of Limbitrol
You're both smiling again!

See the difference in the first week[1]

In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.[1]

In moderate depression and anxiety

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

ROCHE®

Please see summary of product information on adjacent page.

TexasMedicine

VOLUME 83 OCTOBER 1987

Contents

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

J. Forrest Fitch, MD, McAllen
Secretary

James M. Graham, MD, Austin
Harold R. High, MD, Cuero
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

David Vanderpool, MD, Dallas
President

E. Rubin Bernhard, MD, San Antonio
Vice President

Val F. Borum, MD, Fort Worth
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Margie B. Peschel, MD, Fort Worth
Secretary

Robert G. Mickey, Austin
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd, Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Kathy Trombatore, Production Manager/
Editorial Assistant
Patty Illich, Administrative Secretary/
Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Alice L. Smith, MD, Dallas
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates are: Members, $16 per year; nonmembers and institutions, $20 per year; foreign, $24 US currency; single copy, $2.

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701

ARTICLES

23 Child sexual abuse: recognition and response
David G. Oldham, MD; Joan Hebeler, MD; Dan Myers, MD; David A. Waller, MD; Frank Crumley, MD; John G. Looney, MD

30 The treatment of obstructive sleep apnea
Francisco Perez-Guerra, MD

34 Spontaneous rupture of the distal esophagus—Boerhaave's syndrome
Paul Bunnell, MD; Joel Richter, MD

43 Zinc deficiency in a breast-fed infant
Mubariz Naqvi, MD; Anita L. Carroll, RNC, MSN; William McCue, MD; Rolf Habersang, MD

46 Reye's syndrome and juvenile rheumatoid arthritis: a case report in Texas
Gustavo C. Román, MD; Paul M. Munden, MD; David Waagner, MD; Edgar O. Ledbetter, MD

EDITORIALS

5 Child sexual abuse
Linda Jones, MD

FEATURE

51 Q&A: Senator Bentsen on catastrophic coverage

MEDICINE AND THE LAW

55 Legislature adds new life to organ donation and transplantation
C. J. Francisco, JD

NEWS

TMA in action
7 House of Delegates to meet in Austin, Nov. 20–21
7 Friends assist TMA library in acquiring new books
7 Famed neurosurgeon to speak during 1988 annual session
7 Councilors issue opinion on incentive payments
8 Library offers seminar on computer literature search

Health line
8 TSPP appoints task force on AIDS education
8 TDH issues recommendations for routine immunizations
10 FDA considers revision of oral contraceptive PPIs

Socioeconomics
10 HCFA extends deadline for repayment to October
11 Number of physicians grows to 28,549, TSBME says
11 CHAMPUS bases pay to hospitals on DRGs
11 JCAH appoints task forces to identify quality indicators

Capital comments
11 Press conference emphasizes effects of liability crisis
13 Dr Brame appears before Congressional Rural Caucus

16 Newsmakers

DEPARTMENTS

6 Letters
48 Clinical abstracts
61 Deaths
64 Medicine in literature
83 Continuing education directory

ON THE COVER

"Child sexual abuse: recognition and response" is the subject of this month's cover article (page 23), written by David G. Oldham, MD; Joan Hebeler, MD; Dan Myers, MD; David A. Waller, MD; Frank Crumley, MD; and John G. Looney, MD.

The authors present a clinical overview of child abuse, including case examples, epidemiology, clinical manifestations, evaluation procedures, and medicolegal aspects. Cover design by Ed Triggs.

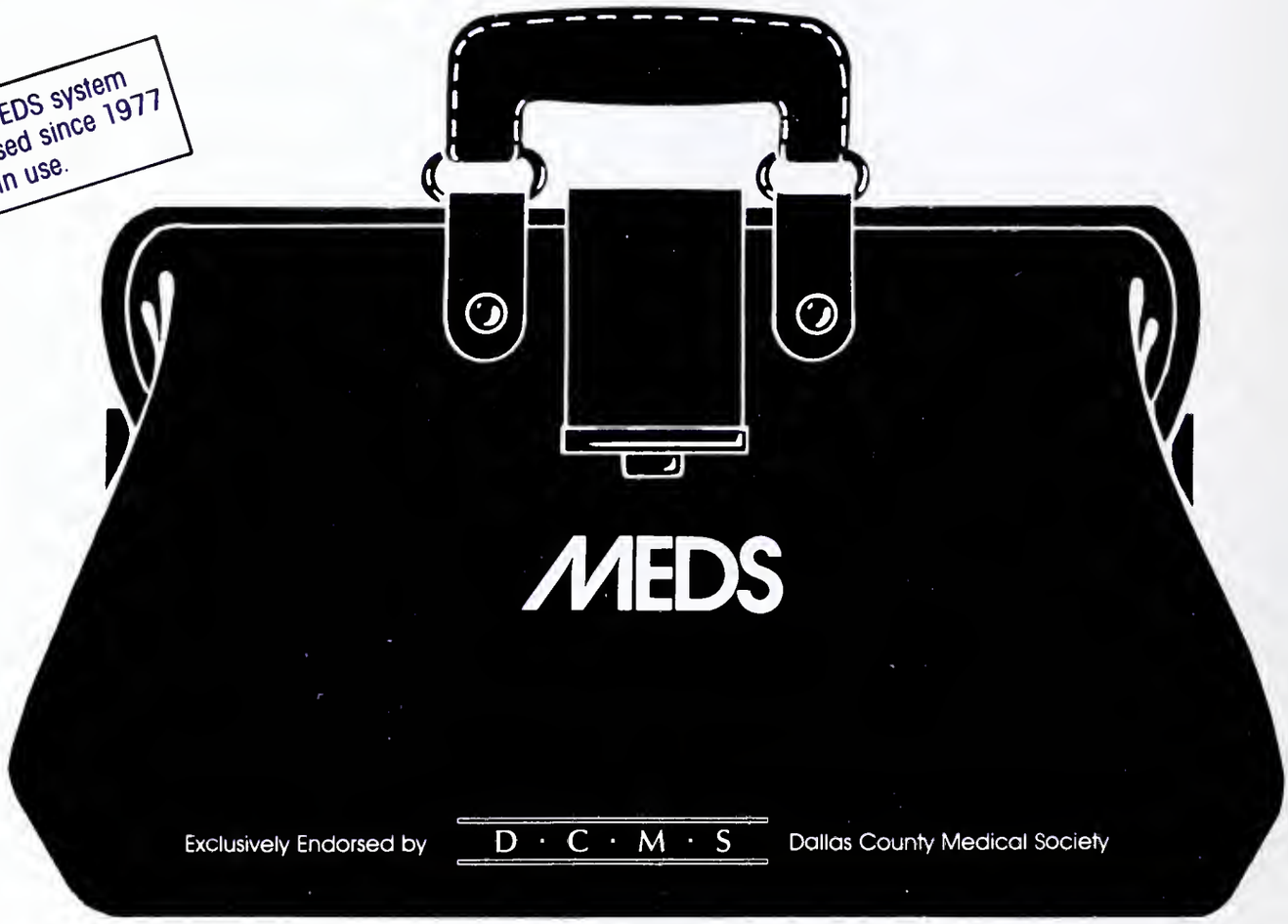
COMING NEXT MONTH

Scheduled for the November issue of *Texas Medicine* are articles on geriatric medicine, peer review, diagnosis and treatment of rhesus alloimmunization, spontaneous regression of tubal pregnancy, and the use of high-dose gamma globulin in preparing patients with idiopathic thrombocytopenic purpura for surgery.

Physicians Computerized Office Management System

WE MAKE HOUSE CALLS

Every MEDS system purchased since 1977 is still in use.



Exclusively Endorsed by D · C · M · S Dallas County Medical Society

MEDS will individually tailor an Office Management system to fit your practice needs. Texas based, MEDS has been satisfying the data processing needs of physicians across the Southwest for over eight years. MEDS systems help simplify and streamline the increasingly complex problem of managing your practice. Contact us so that we can show you all the ways your practice can benefit from a system of your own.

MEDS PROVIDES

- Electronic claims submissions
- State of the art hardware
- Ongoing service, support and training
- Patient scheduling and recall
- Insurance filing and tracking

MEDS

Medical Data Systems, Inc.
Carparate Office Dallas
Ten Thausand Narth Central Suite 1000
Dallas, Texas 75231

In Texas call toll free 1-800-272-MEDS
Natianwide call tall free 1-800-922-MEDS
Dallas/Fart Warth Metra call 263-9812

San Antonio Office
15600 San Pedra Suite 301
San Antania, Texas 78232
(512) 490-0322

Child sexual abuse

Child sexual abuse is a significant and growing problem in our state and nation. In this issue of *Texas Medicine*, Oldham et al have given us a very good overview of the problem and the appropriate medical response.

As physicians, we must be alert to the possibility of sexual abuse in all our pediatric patients. Victims are not protected by their age—even young infants have been sexually abused. Sexual abuse is not confined to one social class, nor is it confined to girls. It has been estimated that as many as one in ten males have been sexually abused as children.

Occasionally the diagnosis of sexual abuse is relatively simple. The presence of any sexually transmitted disease is almost always evidence of sexual abuse (1–5). Rarely, a careful investigation reveals an innocent source for the infection. In other cases, the child may complain of sexual abuse, triggering appropriate medical and social service evaluation.

However, there are many victims of abuse who present with one of the physical or behavioral complaints mentioned in the article. We must be alert to the possibility of abuse as the underlying problem. If we do not ask the appropriate questions and perform the necessary examinations, these children may continue to be abused long after we have our first chance to intervene.

As physicians, we often have difficulty dealing with the possibility of sexual abuse. Incest and other forms of child sexual abuse are strong taboos in our society. We need to be aware of these feelings of anger and disbelief in order to put them aside and offer our patients the assistance they need. Many physicians also feel a lack of expertise in this area. Oldham has explained the basic history and physical examination needed. If the most recent assault was within three days, appropriate tests should be done looking for sperm and semen (microscope slides and cotton swab to be sent to the medical examiner for typing). If more than three days have elapsed, however, there will be no sperm present, and these "special" tests need not be done. All children should be cultured for gonorrhea and have serology for syphilis. Testing for *Chlamydia trachomatis* (culture or antigen testing) should also be performed, if available. AIDS antibody screening probably should also be done if the offender is in one of the high-risk groups for acquisition of HIV. The remainder of the examination is straightforward and should include a general physical examination in addition to examination of the genitalia. Additional training is available on videotape from the United Way; one tape covers the physical examination, and one covers the interview in more depth (6,7).

A child who complains of sexual abuse or who is thought to have been abused is emotionally stressed. The stress can only be increased by having to see a physician who is a stranger to them. Therefore, I hope that most physicians evaluate their own patients for this complaint as often as possible, with consultation as necessary.

After the examination, the physician, with the patient and/or parents, must also make decisions about whether to give prophylaxis for sexually transmitted diseases and pregnancy. STD prophylaxis as outlined in Oldham's article (amoxicillin plus probenicid) will cover most cases of gonorrhea and early syphilis. However, it will not treat *Chlamydia* which is an increasingly common STD. Tetracycline (40 mg/kg/day divided four times a day to a maximum of 500 mg by mouth four times daily for 7 days) or doxycycline (100 mg by mouth twice daily for 7 days), in addition to amoxicillin, will treat *Chlamydia* and is safe in children over 8 years of age. In younger children, erthromycin (50 mg/kg/day divided four times daily) may give adequate coverage for *Chlamydia* infection. Children with positive cultures should be retested after treatment to assure adequate response to therapy.

Girls who are post-menarcheal or who may begin menstruation soon (ie, Tanner stage 3–4 and presence of vaginal leukorrhea) may be candidates for pregnancy prophylaxis. The most recent intercourse must have been within 72 hours, and the physician must be able to establish that the patient is not already pregnant. Under these conditions, pregnancy prophylaxis (Ovral, 2 tablets by mouth every 12 hours for two doses; total dose = 4 tablets) should be explained to the patient so that she may make an informed decision. This regimen is more than 98% effective. Menses will occur within two to three weeks (8).

Careful and complete documentation is extremely important. As much as possible of what the patient says should be quoted. Complete documentation may make physician testimony unnecessary. When physicians are called to court, good documentation will help them to testify more effectively.

Child sexual abuse is a growing problem. Physicians have the potential to decrease the associated morbidity and thus help our patients to grow into healthy adults.

LINDA JONES, MD
Division of General Pediatrics, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284–7808.

REFERENCES

1. Gonorrhea in prepubertal children. Committee on Early Childhood, Adoption, and Dependent Care, American Academy of Pediatrics. Pediatrics 71:553, 1983.

2. Gardner M, Jones JG: Genital herpes acquired by sexual abuse of children. J Pediatr 104(2):243–244, 1984.

3. Ingram DL, White ST, Durfee MF, et al: Sexual contact in children with gonorrhea. Am J Dis Child 136(11):994–996, 1982.

4. Kramer DG, Jason J: Sexually abused children and sexually transmitted diseases. Rev Infect Dis 4(Suppl):883–890, 1982.

5. Seidel J, Zonana J, Totten E: Condylomata acuminata as a sign of sexual abuse in children. J Pediatr 95(4):553–554, 1979.

6. Response: Child Sexual Abuse: A Medical View (Videotape). Los Angeles, United Way, Inc, and Children's Institute International, 1986.

7. Response: Child Sexual Abuse: The Clinical Interview (Videotape). Los Angeles, United Way, Inc, and Children's Institute International, 1986.

8. van Santen MR, Haspels AA: A comparison of high-dose estrogens vs low-dose ethinylestradiol and norgestrel combination in postcoital interception: a study in 493 women. Fertil Steril 43(2):206–213, 1985.

Cigarette tax hike may reduce number of smokers in Texas

In the November 1984 issue of *Texas Medicine* we published a brief article outlining the arguments in favor of increased cigarette taxes (1). These arguments centered on the number of individuals, indicated by scientific research methods, who would stop smoking or would not take up the habit as a direct result of higher costs. In the final hours of the 69th session of the Texas Legislature in 1985, a new cigarette tax specifically dedicated to health promotion activities and prevention of disease was proposed in the legislature, but was killed by opposition from the tobacco industry. We are pleased to see that leaders in the recent second special session, 70th Texas Legislature, pressed by a need for funds for general government, voted an increase in cigarette taxes.

The new 5.5-cent tax per pack can be expected to result in a 7% decrease in the number of teenagers in Texas who become cigarette smokers. This means that approximately 30,000 current young people will avoid the habit. Effects on adult smokers will be in the 2% range, but that translates into about 50,000 adults over the next few years who constructively may be expected to stop smoking. That may also mean a loss of profit in the millions for tobacco merchandisers.

We urge all physicians and others concerned with individual and public health to join us in expressing respect and support for the legislative leaders who have made Texas the state with the greatest economic disincentive for cigarette smoking. This action will indeed have a significant positive impact on the health of Texans, who contribute about 16,000 deaths to the 350,000 tobacco-related deaths annually in this country.

ALFRED McALISTER, PhD
Associate Director, Center for Health Promotion Research and Development, The University of Texas Health Science Center, PO Box 20367, Houston, TX 77225.

SAM A. NIXON, MD
Professor, Department of Family Practice and Community Medicine, The University of Texas Medical School, PO Box 20367, Houston, TX 77225.

CURTIS DICKSON, ME
Past President, Texas Public Health Association, 9331 Willowview, Houston, TX 77080.

REFERENCES

1. McAlister AM, Nixon SA, Dickson C: Developing anti-smoking legislation in Texas. Tex Med 80(Nov):33–36, 1984.

CANCER.
IT'S SIMPLY
NOT WHAT
IT USED
TO BE.

Over the last 40 years, research programs supported by the American Cancer Society have made increasing progress in the treatment, detection and prevention of cancer.

In 1986 alone, the Society funded over 700 projects conducted by the most distinguished scientists and research institutions in the country.

Which is why, this year, hundreds of thousands of people will be successfully treated for the disease.

We are winning.

But we need you to help keep it that way.

AMERICAN CANCER SOCIETY®

Help us keep winning.

News

TMA IN ACTION

House of Delegates to meet in Austin, Nov 20–21

Texas Medical Association's House of Delegates will conduct its 1987 interim session Nov 20–21, 1987, at the Hyatt Regency Hotel in Austin.

The delegates will convene at 2 pm Friday, Nov 20. At 3:30 pm, or immediately following the opening session, reference committees will conduct hearings at which association members may voice their opinions on issues before the house. The delegates will reconvene at 8 am Saturday, Nov 21, to hear and act on recommendations from the reference committees.

The deadline for resolutions for publication in the Handbook for Delegates is Oct 9. Resolutions submitted after that date must include a plea of urgency by the author and a two-thirds affirmative vote of the delegates at the opening session.

Friends assist TMA library in acquiring new books

The Friends of the TMA Memorial Library provide financial assistance for expanding the library's book collection, which now includes 14,000 volumes. Last year, the friends contributed $7,250, bringing the total contributions since the group's founding in 1984 to almost $25,000.

The Friends of the TMA Memorial Library includes four divisions of annual memberships: student, at an annual rate of $5; sustaining, $15; subscribing, $25; and patron, $100 or more. A life membership is available for a $1,000 contribution. Life members' names are added to the Endowment Plaque in the Library Reading Room, which lists 13 contributors.

Library supporters also may wish to contribute through the friends program to commemorate family or friends, to celebrate birthdays, anniversaries or holidays, or to show appreciation to colleagues or professional associates. The library staff notifies each individual or an appropriate representative of the contribution. For gifts of $25 or more, an inscribed bookplate is placed in a new book, naming the person honored or commemorated and the donor. The donor may specify a subject area or discipline for the acquisition.

A form on page 63 of this issue of *Texas Medicine* may be used to join the Friends of the TMA Memorial Library. Further information is available from the library staff at 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

Famed neurosurgeon to speak during 1988 annual session

Robert J. White, MD, PhD, an internationally renowned neurosurgeon, will be a featured speaker at Texas Medical Association's 121st Annual Session, May 12–15, 1988, in San Antonio. Dr White is professor of neurosurgery at Case Western Reserve University School of Medicine and director of the Division of Neurosurgery and the Brain Research Laboratory at Cleveland Metropolitan General Hospital. He is the guest of the TMA Section on Neurological Surgery.

Famed neurosurgeon Robert J. White, MD, PhD, Cleveland, will be a featured speaker during TMA's annual session, May 12–15, 1988, in San Antonio

Robert C. Hardy, MD, San Antonio, chairman of the section, describes Dr White as "an extraordinary person."

"Dr White is an unusually fine speaker and an excellent teacher who has a wide range of interests. He is one of the American physician advisors to the Vatican, and communicates American medicine's point of view to Vatican sources, including the Pope himself. He also has made a number of scientific presentations in Russia," Dr Hardy said.

Dr White is known for his work in clinical brain surgery and experimental work on the nervous system. According to his professional biography, he was the first to isolate the brain in an experimental animal and keep it alive outside of the body and the first scientist to succeed in transplanting and hypothermically storing the brain of an experimental animal. As a result of his research, Dr White has developed and introduced a number of new techniques of operative neurosurgery, including those utilizing low temperature phenomena, which have application in treating acute spinal cord trauma and protecting the brain during and following surgery.

Councilors issue opinion on incentive payments

Texas Medical Association's Board of Councilors has issued an opinion on incentive payments to physicians from third party payors and revised an opinion on health facility ownership by physicians.

Meeting May 13, 1987, the board adopted an opinion titled "Incentive Payments—Third Party Payors," which reads: "It is the opinion of the Board of Councilors that the ethical obligation by a physician to provide quality medical care to a patient supersedes any financial incentive between the physician and a third party payor."

During the same meeting, the board revised by addition its statement that, "For a physician to unnecessarily hospitalize a patient or prolong *or reduce* a patient's stay in the health facility for the physician's financial benefit would be unethical." (Italics indicate the addition.) The opinion, titled "Health Facility Ownership by Physician," now reads:

"A physician may own or have a financial interest in a for-profit hospital, nursing home, or other health facility such as a free-standing surgical center or emergency clinic. However, the physician has an affirmative ethical obligation to disclose his ownership of a health facility to his patient, prior to admission or utilization.

"Under no circumstances may the physician place his own financial interest above the welfare of his patients. The prime objective of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration. For a physician to unnecessarily hospitalize a patient or prolong or reduce a patient's stay in the health facility for the physician's financial benefit would be unethical.

"If a conflict develops between the physician's financial interests and the physician's responsibilities to the patient, the conflict must be resolved to the patient's benefit.

"A physician should not be influenced in the prescribing of drugs, devices, or appliances by a direct or indirect financial interest in a pharmaceutical firm or other supplier. Whether the firm is a manufacturer, distributor, wholesaler, or repackager of the products involved is immaterial. Reputable firms rely on quality and efficacy to sell their products under competitive circumstances and do not appeal to physicians to have financial involvements with the firm in order to influence their prescribing. A physician may own or operate a pharmacy if there is no resulting exploitation of patients."

The Board of Councilors is composed of one councilor and one vice councilor from each of 15 geographic districts. The board considers questions concerning medical ethics and issues opinions on those questions. *Current Opinions of the Board of Councilors*, a publication containing all of the board's opinions, is available upon request from the Office of Medical Ethics, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

Library offers seminar on computer literature search

The Texas Medical Association's Memorial Library is offering a seminar to teach the basic skills necessary for searching the medical literature available through the National Library of Medicine's (NLM) computerized databases, primarily the MEDLINE system. The course is scheduled for Saturday, Oct 24, from 2 pm to 6 pm in the TMA headquarters building at 1801 N Lamar Blvd, Austin.

In addition to MEDLINE, the course will introduce students to other vendors and systems available to "end-users" and offer a hands-on demonstration of GRATEFUL MED, a new "user-friendly" software package. Upon completion of the course, enrollees will receive an application for a user identification number that NLM preassigns to those who decide to continue searching on their own after the class.

No previous experience is required, although basic knowledge of computers is helpful. A registration fee of $25 is required to confirm attendance. Further information on the course is available from Susan Brock, TMA Memorial Library, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704.

Texas Medical Association designates this continuing medical education activity as meeting the criteria for four credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

HEALTH LINE

TSPP appoints task force on AIDS education

Robert Zapalac, MD, Austin, president of the Texas Society of Psychiatric Physicians, has appointed a task force on AIDS education. Chaired by Francisco Fernandez, MD, Houston, the task force will coordinate educational efforts between the state psychiatric society and the American Psychiatric Association to provide health care professionals with information and training on the recognition and management of psychiatric aspects of AIDS and its related complications. A comprehensive interdisciplinary medical management program will address the relationship between biomedical and neuropsychiatric aspects of AIDS, including dementia.

Members of the task force are Grady Baskin, MD, Tyler; Jim Black, MD, Dallas; Russell Gardner, MD, Galveston; Karl Goodkin, MD, Dallas; Meg Kaufmann, MD, Dallas; Betty Pfefferbaum, MD, Houston; Margo Restrepo, MD, Houston; and Mark D'Eramo, MD, Houston.

Kenneth Vogtsberger, MD, San Antonio, is coordinating efforts between the task force and the Texas Medical Association Council on Annual Session and Scientific Programming to offer a major scientific program on AIDS during TMA's 1988 annual session in San Antonio. The program will be offered through the TMA Section on Psychiatry.

Information on the task force and its activities is available from Francisco Fernandez, MD, St Luke's Episcopal Hospital, PO Box 20269, Houston, TX 77225.

TDH issues recommendations for routine immunizations

The Texas Department of Health has published the latest version of the "Suggested Schedule for Routine Immunizations in Public Health Clinics in Texas." The schedule, based upon recommendations

Quality does not just happen...

ABOUT YESTERDAY

Since 1955, your Texas Medical Association has sponsored an Insurance Program as a service to its members. It is a responsibility your Association takes seriously. The Program's primary goal has always been—to provide the best coverage at the lowest possible cost. Through the years, the Program has been expanded to meet the needs of its members. This has resulted in the advanced offerings we have today.

ABOUT TODAY

And today, we doubt if your Program can be beat. The cost, in relation to benefits, makes your Program "the Competition." Of course, a good program without good service is of no value to its members. That is why your Association has a salaried staff working to assist you. The staff works in your best interest—whether it concerns enrollment, service or claims.

...AND TOMORROW

The Insurance Trust maintains an independent actuary to advise and guide us. As inflation continues to rise, maximums have been increased to cope with tomorrow's insurance requirements. We are planning with accountability to you in mind. Even though we cannot solve all the problems that arise in a given period of time, we think our efforts prove—we are always working in your best interests.

Your Committee on Association Insurance Programs meets at least three times annually to carefully analyze premium income, claim payments, reserve funds, enrollment and service. As we strive to serve you, you can help by giving us your comments—questions—suggestions. Call or write—better yet, attend one of our meetings. All lines of communication are open.

Committee on Association Insuronce Programs
Ronold J. Pinkenburg, M.D., Chm.
Robert A. Dennison, M.D.
Albert E. Gunn, M.D.
Chorles F. Hendler, M.D.
Lorry J. O'Brien, M.D.
Shirley Molenich, M.D.
Pedro DeLeon, M.D.
Henry A. Dunzi, M.D.
Jomes R. Sowyers, M.D.
Mrs. Thomos G. Gloss, Aux. Rep.

for information, contact

TEXAS MEDICAL ASSOCIATION INSURANCE PROGRAM

1901 NORTH LAMAR BOULEVARD AUSTIN, TEXAS 78705
CALL TOLL FREE: 1-800-252-9318

- *Long Term Disability Income*
- *Life Insurance*
- *Major Medical*
- *Office Overhead*
- *Personal Accident*

underwritten by
PRUCO LIFE INSURANCE COMPANY OF TEXAS
A Subsidiary of The PRUDENTIAL

of the Immunizations Practices Advisory Committee and the American Academy of Pediatrics, includes the *Haemophilus influenzae* type b vaccines for two-year-old children and the simultaneous administration of DTP vaccine, MMR vaccine, and OPV vaccine for children 15 months of age and older.

The schedule suggests the following immunizations: at two months, diphtheria, tetanus, pertussis (DTP), and trivalent oral polio vaccine (OPV); at 4 months, DTP, OPV; at 6 months, DTP, OPV (6-month OPV optional); at 15 months, DTP, OPV, and measles, mumps, rubella (MMR); at 2 years, *Haemophilus influenza* type b (Hib) polysaccharide vaccine; at 4-6 years, DTP, OVP; at 14-16 years, tetanus-diphtheria adult (Td); and thereafter, Td every ten years.

FDA considers revision of oral contraceptive PPIs

The Food and Drug Administration expects to issue a final rule revising the requirements for patient package inserts (PPIs) for combination estrogen-progestogen oral contraceptives by the end of 1987. The proposed revision would make it easier for manufacturers to update patient package inserts (PPIs) to reflect new information about oral contraceptives and allow labelers greater flexibility in developing and distributing patient package inserts.

While rules issued in 1970 and 1978 contain detailed PPI requirements, the proposed rule enumerates general categories of information, including possible benefits associated with oral contraceptive use. According to the April 21, 1987, edition of the *Federal Register*, the specificity required by the regulations currently in force " . . . means that any significant new information learned about the drug's benefits and risks can only be reflected in the patient package insert text after the oral contraceptive patient package insert regulation has been revised, ie, on completion of notice and comment rulemaking. This procedural obligation may delay communication of important new information about oral contraceptives to drug product users."

The proposed rule also eliminates the current requirement that a summary PPI be included in the drug package in addition to a detailed PPI leaflet. Under the proposed revision, the summary may be combined with the more detailed PPI into a single leaflet. It also eliminates current requirements with respect to printing specifications for the PPI, noting that routine review of labels ensures that drug labeling is legible and readable.

Finally, under current requirements, the PPI must physically accompany the drug product from the manufacturer or labeler through the wholesaler to the dispenser of the product. The proposed rule would permit distributors of oral contraceptives to adopt whatever method of PPI distribution they choose, provided all persons in the distribution chain receive an adequate number of PPIs to meet their responsibilities.

SOCIOECONOMICS

HCFA extends deadline for repayment to October

The Health Care Financing Administration (HCFA) has granted a 30-day extension to physicians who received Medicare Part B "overpayment recoupment" letters. At press time, a letter on the recoupment was scheduled to be mailed on or about Sept 4, with a deadline the first week in October.

TMA President David Vanderpool, MD, requested the extension, noting that refunding amounts ranging up to several hundred thousand dollars placed undue hardship on some medical practices. Meanwhile, Texas Medical Association is investigating the validity of the computations and reliability of the data on which the recoupment effort is based.

HCFA also has contacted more than 230,000 Medicare beneficiaries in Texas who are eligible for reimbursement of coinsurance amounts from physicians or who are liable for an overpayment from the carrier.

More than 5,000 Texas physicians are affected by procedure coding conversion errors that resulted in overpayments on 18 procedures during the period between July 7, 1985, and April 1, 1986. During that time, HCFA was converting its code system, and the Medicare Part B carrier determined charges on a statewide fee basis that it considered fair and reasonable. In January 1986, HCFA directed the carrier to redetermine charges on each physician's individual profile basis. For the 18 codes involved in the redetermination, the individual profile-based computation resulted in lower charges than the fee-based computation. The difference between the charges, amounting to more than $12 million statewide, was considered an "overpayment."

Physicians have five options for responding to the recoupment letter:

1. Seek immediate reconsideration of the "overpayment" recoupment in writing.
2. Pay the amount demanded before the new deadline and avoid interest charges.
3. Do nothing, at which point the Medicare carrier will recoup the amount owed by reducing future Medicare payments at the rate of 50 cents on the dollar until the entire amount plus interest (7%) is paid in full. The offset in payments would begin 30 days after the date of the refund request.
4. Request that the amount to be recouped be withheld at a rate less than 50 cents on the dollar, suggesting a rate which probably would liquidate the amount, plus accrued interest, within a year.
5. Request that the amount to be recouped be paid back in installments. Physicians should state and be prepared to prove that to pay the amount back in a lump sum would cause a financial hardship and suggest an installment repayment rate.

Correspondence regarding the recoupment should be addressed to Linda Parker, Medicare Part B, Overpayment Section, 2412 W Morton, Denison, TX 75020, phone (214)463–3895. TMA suggests that correspondence be sent by certified mail, return receipt requested.

Number of physicians grows to 28,549, TSBME says

The number of licensed physicians in Texas has grown to 28,549, a 2.5% increase (703 physicians) over the figure for 1986. The official count comes from the Texas State Board of Medical Examiners and reflects statistics for July 1 of each year.

The current count includes 27,076 doctors of medicine and 1,473 doctors of osteopathy. In 1986, there were 26,448 MDs and 1,398 DOs.

Physicians who are graduates of Texas schools number 12,325. There are 10,792 graduates of other schools in the United States, and 5,432 graduates of foreign medical schools.

Harris County has the largest physician population, with 6,438 MDs and DOs, followed by Dallas County, 4,405, and Bexar County, 2,837. According to TSBME records of physicians' addresses, there are no MDs or DOs in 17 counties: Armstrong, Borden, Briscoe, Coke, Glasscock, Hartley, Hudspeth, Irion, Jeff Davis, Kenedy, Kent, King, Loving, McMullen, Motley, Real, and Terrell.

A total of 42,741 physicians hold Texas licenses, including 22,492 licensed by examination and 20,249 licensed by reciprocity.

CHAMPUS bases pay to hospitals on DRGs

Beginning Oct 1, 1987, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) will pay most hospitals in the United States, the District of Columbia, and Puerto Rico according to a diagnosis-related group (DRG) system.

Under the new DRG system, all beneficiaries other than active-duty dependents will pay a fixed, daily amount, no matter how expensive the care, for each admission to a hospital subject to DRGs. At press time, the exact amount of the daily payment had not been established. Active-duty families will continue to pay $25 for each admission or a daily fee, whichever is greater.

Since Jan 1, 1987, federal law has required that hospitals participating in Medicare also participate in CHAMPUS. These hospitals must agree to accept the CHAMPUS payment as their full fee and collect only the patient's cost-share. This means that in a participating hospital the CHAMPUS patient does not pay any amounts that are higher than the CHAMPUS-determined allowable DRG payment for covered services.

The DRG system does not specify a number of authorized days in the hospital. If a CHAMPUS beneficiary is sicker than the average patient, his or her cost-share for care in a participating hospital will be only the daily amount. However, if the beneficiary chooses to go to a nonparticipating hospital or gets care that is not covered by CHAMPUS, the beneficiary will be responsible for costs above the flat, daily amount.

The new CHAMPUS DRG system will not affect certain services, such as psychiatric and substance abuse services, kidney acquisition costs, and heart and liver transplants. And certain hospitals, such as psychiatric, long-term care, rehabilitation, sole community and cancer hospitals, Christian Science sanitoria, and distinct parts of a hospital providing psychiatric, rehabilitation, and alcohol and drug services will not be affected.

The CHAMPUS DRG system is expected to save the government more than $200 million each year and will mean lower cost-shares for retirees and their families because the total amounts allowed for hospital payment will be reduced.

JCAH appoints task forces to identify quality indicators

Beginning an initiative to devise a new accreditation process, the Joint Commission on Accreditation of Hospitals has appointed task forces to identify quality indicators hospitalwide and in obstetrics and anesthesia. The JCAH expects to implement the new accreditation process in 1990.

Texans Gerald P. Bodey, Sr, MD, and M.T. Jenkins, MD, are participating as members of the task forces on hospitalwide clinical indicators and anesthesia care, respectively. Dr Bodey is chairman of the Department of Medical Specialties at M.D. Anderson Hospital, Houston. Dr Jenkins is the McDermott Professor of Anesthesiology at the University of Texas Southwestern Medical School, Dallas.

The JCAH intends to develop indicators for monitoring care in all major services areas in acute care hospitals, according to James S. Roberts, MD, senior vice president for research and planning at the joint commission. "In addition, starting next year, we will begin selecting indicators for care in nursing homes, hospices, ambulatory centers, and mental health programs as well," he said.

In late 1987, the commission will launch a pilot project to collect and analyze clinical indicator data from a volunteer group of diverse hospitals. These data will be used in early 1988 as the basis for a pilot test of a modified, on-site survey process in these same hospitals.

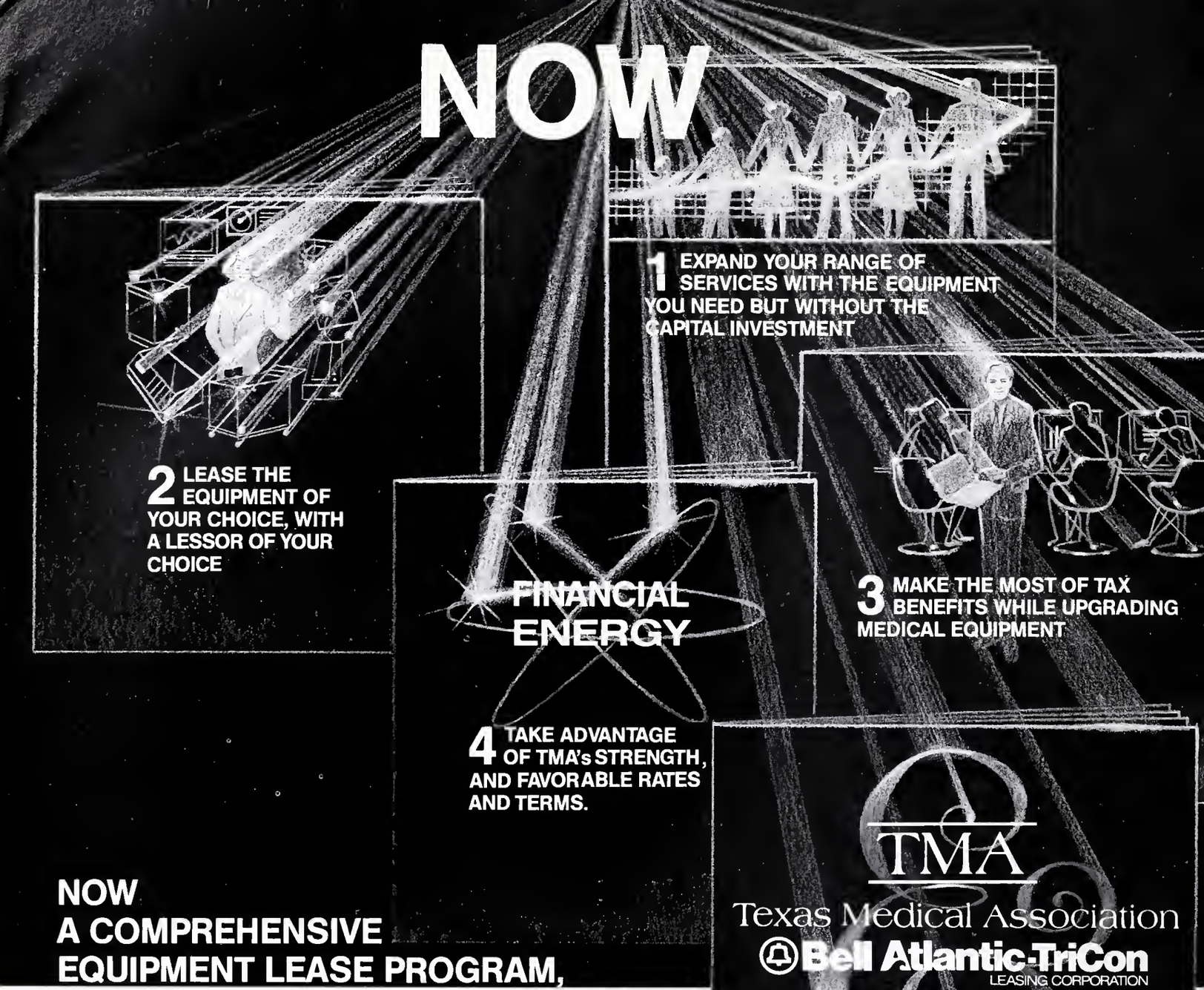
CAPITAL COMMENTS

Press conference emphasizes effects of liability crisis

During a press conference at the state capitol, representatives of the Texas Medical Association warned that obstetrical and emergency care are becoming less accessible and research is being hindered because medical professional liability insurance is unafforadable. To alleviate the situation, the association will work toward reshaping the state's Supreme Court, whose decisions have eroded tort reforms passed in 1977 and contributed to the crisis.

"We recently conducted an informal phone survey across east and south Texas and were alarmed by what we found," TMA President David Vanderpool, MD, Dallas announced. Physicians in 18 county medical societies said that some doctors and hospitals in those areas had limited obstetrical care and that they anticipated more limitations in the near future. In nine county medical societies, there are physicians who have stopped delivering babies.

"The reasons for the crisis are compelling and simple," Dr Vanderpool said. "As our State Supreme Court has expanded theories of recovery and invented new duties where none previously existed,


NOW
1 EXPAND YOUR RANGE OF SERVICES WITH THE EQUIPMENT YOU NEED BUT WITHOUT THE CAPITAL INVESTMENT
2 LEASE THE EQUIPMENT OF YOUR CHOICE, WITH A LESSOR OF YOUR CHOICE
FINANCIAL ENERGY
3 MAKE THE MOST OF TAX BENEFITS WHILE UPGRADING MEDICAL EQUIPMENT
4 TAKE ADVANTAGE OF TMA's STRENGTH, AND FAVORABLE RATES AND TERMS.

TMA
Texas Medical Association
Bell Atlantic-TriCon
LEASING CORPORATION

NOW A COMPREHENSIVE EQUIPMENT LEASE PROGRAM, DESIGNED FOR THE TEXAS MEDICAL ASSOCIATION

Expect extra dimensions like these:

Pay as you earn. Use the revenue that your new equipment generates to make your monthly lease payments. Save your equity capital for other uses. Acquire the medical or office equipment that you need, expand the range of your services, and increase profits, without the capital investment.

Conserve capital. Use your capital freed by exercising the lease option for assets that appreciate rather than depreciate. Real estate or a Keogh account, for example.

Special rates and terms. Because of the endorsement, Bell Atlantic TriCon is providing TMA members with special rates, terms and credit conditions. On transactions less than $25,000 for physicians in practice three years or more, Bell Atlantic TriCon will not require financial statements.

Additional credit lines. Your new line of credit with Bell Atlantic TriCon will enable you to conserve your bank lines for patient accounts receivable/insurance receivable financing or other short term working capital needs.

100% financing. Finance 100% of the cost to acquire the equipment you need to manage your business or provide additional patient services. Financing can include consulting fees, software costs, training, freight, leasehold improvements and shipping. Avoid a large down payment.

Fixed rate, long term financing. With interest rates starting to climb, this is an excellent time to lock in a monthly payment based on today's low special TMA rates.

Guaranteed purchase options. While you enjoy protection from obsolescence, you also have an agreed upon purchase option price should you elect to own the equipment.

Tax benefits. Investigate with your accountant how the benefits of leasing will apply to your practice.

Financial energy. Bell Atlantic TriCon, part of Bell Atlantic Capital Corp., has the financial strength and desire to meet all your leasing requirements, no matter how extensive or modest.

Choose carefully. Make sure the same care that goes into your equipment selection process goes into your selection of a finance source.

Applications accepted by phone.

For further information on the TMA *easy to use* program—contact Mike Stephen at 1-800-635-4023 or TMA member services at 512-477-6704.

Bell Atlantic TriCon
6565 West Loop South
Bellaire, Texas 77401

the value of lawsuits has gone up astronomically. The insurance to cover those increased values also has gone up proportionally, and, tragically, access to medical care is going down."

Joining Dr Vanderpool at the press conference were renowned Houston heart surgeon Denton Cooley, MD, and Rep Mike McKinney, MD, (D-Centerville).

Dr Cooley said highly skilled physicians who perform high-risk procedures are sued most often. As a result, many of Texas' best trained physicians have stopped performing these procedures and technical advances have been impeded. The medical profession in Texas needs relief from the professional liability crisis, Dr Cooley added. "We want to remain on the forefront of technological research in Texas," he said.

Dr Brame appears before Congressional Rural Caucus

Texas Medical Association's Immediate Past President Jim Bob Brame, MD, Eldorado, appeared recently before the Congressional Rural Caucus to discuss three major issues facing physicians who practice in rural areas: Medicare and Medicaid reimbursement, the Medicare peer review process, and the medical liability crisis.

Dr Brame traveled to Washington, DC, Aug 5, to present his views to the caucus, which includes 67 congressmen from rural districts in 33 states. He appeared not only as a representative of TMA, but also in his capacity as a member of the Physician Payment Review Commission, which Congress chartered, a diplomate of the American Board of Family Practice, a charter fellow of the American Academy of Family Physicians, and, " . . . most important, a country doctor . . . from a very small West Texas town."

Dr Brame told the Congressmen, "Rural communities are older and poorer than most urban areas. We treat more Medicare/Medicaid patients and get paid less for doing so . . . a double whammy." He added that some Medicare payments for office visits in his hometown of Eldorado do not meet overhead costs.

The average cost of an urban hospital discharge is 24% higher than the average cost of a rural hospital discharge in the region that includes Texas, Dr Brame said. "Yet equipment, medical supplies, and utility costs are the same in both areas. In fact, some are higher in rural areas because of transportation costs and the inability to obtain quantity price breaks."

Turning to the peer review process, Dr Brame noted that to date, almost every physician sanctioned in Texas has been from a rural setting, and "I can assure that the word already is spreading like a prairie fire through our medical schools and residency programs . . . . The pool of rural physicians is growing older and smaller, and we simply do not have enough qualified young doctors willing to come to the rural setting."

He told the caucus that a uniform peer review standard for physicians in rural and urban settings is basically unfair. "In the peer review process, if a doctor in Eldorado is held to the same technical standards of care as his brother at a big city hospital, then he will never be eligible to treat another Medicare patient," Dr Brame said. He added that TMA's Physician Advocacy Committee and the Texas Medical Foundation, the state's peer review organization, are working together to assure that reviewers are from similar settings as those physicians being reviewed.

Dr Brame said that as professional liability insurance has become more expensive, physicians in rural areas have quit delivering babies. Subsequently, 18 rural Texas hospitals have closed, and another 11 rural hospitals have limited obstetrical care. "(Physicians do not) deliver enough babies in a rural setting to offset premiums of $18,500 a year or more for extremely limited coverages. And our rural hospitals are seeing equally onerous increases in their premiums," Dr Brame said.

In conclusion, Dr Brame offered five suggestions for improving health care in rural settings:

—Offer financial inducements, such as deferred student loan payments, practice grants, and tax exemptions, in return for a specified period of service in a rural area.

—Improve communications systems between rural facilities and regional hospitals and the development of a system for quick consultations.

—Expand state medical society placement services.

—Develop more medical school rural preceptor programs.

—Disperse residency programs into rural areas.

With six members, Texas has more representatives than any other state in the Congressional Rural Caucus. Texans in the caucus are Congressmen Beau Boulter, Albert Bustamente, Jim Chapman, E. Kika de la Garza, Mac Sweeney, and Charles Stenholm.

Drs Mike McKinney, David Vanderpool, and Denton Cooley address reporters during a press conference at the state capitol.

EMERGENCY! MEDICAL CLAIMS OVERLOAD!

The EMC*EXPRESS™ *System*

TO THE RESCUE!

If claims processing paperwork can get your office all backed up, you need to call in GE Information Services' EMC*EXPRESS rescue squad.

The **EMC*EXPRESS System** is a computerized medical claims system which enables you to deliver medical claims to participating carriers within hours of treating a patient. One phone call is all it takes to have your computer speed all the information needed to process your claims to **multiple** carriers, including Medicare, commercial and private.

Working with the software already in your office, the **EMC*EXPRESS** System helps you:

- Reduce your administrative costs for processing claims
- Reduce the number of claims rejected because of incorrect or incomplete information
- Speed up your claims payment—**and that can put new life into your cash flow.**

The EMC*EXPRESS System and Your Office

The EMC*EXPRESS System accommodates a broad range of practice sizes and a wide variety of office computer systems, from easy-to-use claims entry systems to the most sophisticated practice management systems.

So whatever the size of your office, whatever the magnitude of your paperwork problem, we recommend the **EMC*EXPRESS** System as your treatment of choice.

For more than 20 years, GE Information Services has been helping companies around the world do business better. And now GE has teamed up with authorized system vendors to bring rapid, accurate, and cost-effective electronic medical claims communications to the healthcare field.

To have the EMC*EXPRESS rescue squad come to your aid, call an authorized EMC*EXPRESS system vendor or contact us directly at 1-800-433-3683, extension 7321. We'll send help your way before you can say, "Emergency!"

GE INFORMATION SERVICES

USA

The EMC*EXPRESS™ System

PARTICIPATING CARRIERS

Blue Cross and Blue Shield of Texas
Medicare B, and Private Business Claims
National Heritage Insurance Co.
Medicaid Claims

NEIC ACTIVE PARTICIPANTS

Aetna Life & Casualty
Allstate Life Insurance Co.
Benefit Trust Life
CNA Insurance Companies
Confederation Administration Life Insurance Co.
Confederation Life Insurance Co.
Connecticut Life Insurance Co.
Connecticut General Life Insurance Co. (CIGNA)
Equitable Life Assurance Society of the U.S.
General American Life Insurance Co.
The Great-West Life Assurance Co. of America
Gulf Group Services
The Hartford Insurance Group
John Hancock Mutual Life Insurance Co.
Liberty Life Assurance Co.
Lincoln National Life Insurance Co.
Massachusetts Mutual Life Insurance Co.
Metropolitan Life Insurance Co.
Mutual of Omaha Insurance Co.
New England Mutual Life Insurance Co.
New York Life Insurance Co.
Pacific Mutual Life Insurance Co.
Philadelphia American Life Insurance Co.
Philadelphia Life Insurance Co.
Phoenix Mutual Life Insurance Co.
Pilot Life Insurance Co.
Principal Mutual Financial Group
Provident Life and Accident Insurance Co.
Prudential Insurance Co.
State Mutual Insurance Co.
The Travelers Insurance Co.
(includes Railroad Retirement)
Unionmutual Stock Life Insurance Co.
PPO Network, Inc.

AUTHORIZED SYSTEM VENDORS

American Computer Corporation	619 571-7685
Annson Systems, Inc.	312 564-8310
Articulate Publications, Inc.	800 872-2282
Artificial Intelligence, Inc.	206 271-8633
CALYX	800 558-2208
Colwell Systems, Inc.	800 637-1140
Coopervision	800 772-CVIS
Direct Connection Systems	817 757-4007
EDP Systems, Inc.	214 881-8454
Health America Systems	312 362-3730
LDS, Inc.	913 648-7111
MOS, Inc.	800 323-6671
Physicians' Micro Systems, Inc.	206 441-8490
Physicians' Office Computer	213 603-0555
PPO Network, Inc.	713 590-2175
Prism Data Systems	800 428-2310
ProSource Systems	800 645-5609
Santiago Data Systems, Inc.	800 652-3500
UNIVAIR, Inc.	314 426-1099
Westland Software House, Inc.	818 992-0081

NEW VENDORS AND CARRIERS ADDED REGULARLY. FOR MOST RECENT LISTINGS, CALL 1-800-433-3683.

GE INFORMATION SERVICES
USA

401 N. WASHINGTON ST., ROCKVILLE, MD 20850

TXMED1087

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

api

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

NEWSMAKERS

R. EDWARD CARTER, MD, has been appointed president and chief executive officer of The Institute for Rehabilitation and Research (TIRR) in Houston. A specialist in restorative and rehabilitative medicine, Dr Carter previously held the position of vice president for medical affairs at TIRR, where he has served in several clinical and administrative capacities since joining the staff in 1960.

CONNIE C.W. HSIA, MD, has been appointed the Will Rogers Pulmonary Research Fellow at The University of Texas Health Science Center at Dallas. She will be studying human respiratory muscle fatigue as a source of exercise limitation after lung resection, under the direction of Robert L. Johnson, Jr, MD.

FLOYD F. McSPADDEN, MD, Houston, has been reelected secretary of the Flying Physicians Association (FPA). NORRIS H. READY, MD, Waco, will serve as an FPA director for a three-year term, and RICHARD M. FENNO, MD, Alvin, will serve one more year as a director as a result of 1985 elections.

MICHAEL D. SCHNEIDER, MD, has been named the recipient of the 1987 Lyndon Baines Johnson Award for Research by the American Heart Association, Texas Affiliate. Dr Schneider is a medical researcher and assistant professor of medicine, cell biology, and physiology and molecular biophysics at Baylor College of Medicine in Houston.

JACK ROTH, MD, chairman of the department of thoracic surgery at The University of Texas M.D. Anderson Hospital and Tumor Institute in Houston, has received one of the National Cancer Institute's (NCI) most prestigious grants—a merit award. The award includes a five-year $575,000 grant and a guaranteed expedited review for additional funds for as many as five more years. His current research involves designing immunotoxins that have effectively destroyed widespread lung tumors in laboratory mice.

MELVIN L. SAMUELS, MD, MARGARET P. SULLIVAN, MD, and SIDNEY WALLACE, MD, have been honored with distinguished service awards by The University of Texas Cancer Center. Additionally, Dr Wallace received an outstanding achievement award.

AIM HIGH

PHYSICIAN SPECIALISTS.

The Air Force can make you an attractive offer—outstanding compensation, better working hours plus opportunities for professional development. You can have a challenging practice and time to spend with your family. Find out what the Air Force offers a specialist up to age 58. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 661-5711 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE

To show you how many hypertensives stayed on INDERAL® LA (PROPRANOLOL HCl) after a major nationwide trial...

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL® LA stayed on INDERAL LA.[1*]

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.
A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl)
LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

NOW AVAILABLE...
NEW LOW DOSE
INDERAL® LA 60 mg
(PROPRANOLOL HCl)
LONG ACTING CAPSULES

Please see next page for brief summary of prescribing information

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period, the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours, then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

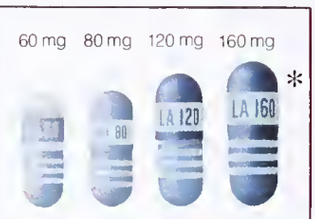
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia; LE-like reactions; psoriasiform rashes; dry eyes; male impotence; and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

1R7119/887

Ayerst® AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

Freedom from pain

Just one part of pain relief therapy.

Vicodin® provides greater patient acceptance

COMPARATIVE PHARMACOLOGY OF THREE ANALGESICS

	CONSTIPATION	RESPIRATORY DEPRESSION	SEDATION	EMESIS	PHYSICAL DEPENDENCE
HYDROCODONE		X			X
CODEINE	X	X	X	X	X
OXYCODONE	XX	XX	XX	XX	XX

Blank space indicates that no such activity has been reported.

Table adapted from Facts and Comparisons (Nov.) 1984 and Catalano RB. The medical approach to management of pain caused by cancer. "Semin Oncol" 1975; 2; 379-92 and Reuler JB, et. al. The chronic pain syndrome: misconceptions and management. "Ann Intern Med" 1980; 93; 588-96.

- Vicodin offers: less nausea, less sedation, less constipation.

...and longer lasting pain relief– up to 6 hours.

- Vicodin contains hydrocodone not codeine. In one study, 10 mg. of hydrocodone alone was shown to be as effective as 60 mg. of codeine.[1]
- In a double-blind study, Vicodin (2 tablets), provided longer lasting pain relief than 60 mg. of codeine.[2]

Plus...

- Vicodin offers the convenience of CIII prescribing.
- Dosage flexibility–1 tablet every 6 hours or 2 tablets every 6 hours (up to 8 tablets in 24 hours).

Vicodin®

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

The original hydrocodone analgesic.

Specify "Dispense as written" for the original hydrocodone analgesic.

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.
WARNINGS:
Drug Abuse and Dependence: VICODIN® is subject to the Federal Controlled Substances Act (Schedule III). Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN should be prescribed and administered with the same caution appropriate to the use of other oral-narcotic-containing medications.
Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression by acting directly on brain stem respiratory centers. Hydrocodone also affects centers that control respiratory rhythm, and may produce irregular and periodic breathing.
Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.
PRECAUTIONS:
Special Risk Patients: VICODIN should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.
Information For Patients: VICODIN, like all narcotics, may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly.
Cough Reflex: Hydrocodone suppresses the cough reflex; caution should be exercised when VICODIN is used postoperatively and in patients with pulmonary disease.
Drug Interactions: The CNS-depressant effects of VICODIN may be additive with that of other CNS depressants. When combined therapy is contemplated, the dose of one or both agents should be reduced. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.
Usage in Pregnancy: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.
Labor and Delivery: Administration of VICODIN to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.
Nursing Mothers: It is not known whether this drug is excreted in human milk; therefore, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS:
Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, dizziness, psychic dependence, mood changes.
Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of VICODIN may produce constipation.
Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.
Respiratory Depression: (See WARNINGS.)
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. However, tolerance to hydrocodone can develop with continued use, and the incidence of untoward effects is dose related.
The usual dose is one tablet every six hours as needed for pain. (If necessary, this dose may be repeated at four-hour intervals.) In cases of more severe pain, two tablets every six hours (up to eight tablets in 24 hours) may be required.

Revised, April 1982. 5685

1. Hopkinson JH III: *Curr Ther Res* 24: 503-516, 1978
2. Beaver, WT *Arch Intern Med*, 141:293-300, 1981.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

© 1986, BASF K&F Corporation 5768/9-86 Printed in U.S.A.

vicodin® III

hydrocodone bitartrate 5 mg. (Warning: May be habit forming) with acetaminophen 500 mg.

DAVID G. OLDHAM, MD
JOAN HEBELER, MD
DAN MYERS, MD
DAVID A. WALLER, MD
FRANK CRUMLEY, MD
JOHN G. LOONEY, MD

Child sexual abuse: recognition and response

Child sexual abuse is a significant medical problem in Texas and throughout the nation. Only in the last five to ten years, however, has this issue begun receiving appropriate professional and public attention. Coverage in the media of child sexual abuse is sensationalized. Television and movie dramatizations often portray stereotypes of the child and adolescent victims and their families. Sexual abuse in male children tends to be overlooked. Physical and mental disorders in the child victims and offenders are neglected when only the sociocultural factors in sexual abuse are addressed by the media. Public reaction to child sexual abuse is marked by confusion and anxiety.

Physicians are in a unique position to diagnose, treat, and educate the public about child sexual abuse. Physicians have historically avoided this problem, particularly in the cases of incest, and underestimated its severity and prevalence. Reasons for this avoidance include lack of clinical knowledge and assessment skills, feelings of revulsion and disbelief, and fear of legal entanglements. It is imperative, at this time of intense public concern and confusion, that physicians take the lead in addressing this medical issue. Physicians are mandated by law to report cases of child sexual abuse, but clinical responsibilities extend beyond making a report. Early diagnosis and referral for specialized treatment will help reduce the morbidity and long-term sequelae associated with the sexual abuse of children and adolescents.

The purpose of this article is to provide a clinical overview of child sexual abuse so that Texas physicians will know how to recognize the related signs and symptoms and will be able to take responsible action. Case examples, epidemiology, clinical manifestations, evaluation procedures, and medicolegal aspects of child sexual abuse are reviewed.

Case examples

Sexual abuse is physical contact or other interaction between a child and an adult in which the child is being used for sexual gratification. Sexual abuse may also be committed by a person under age 18.

Incest is defined as any sexual activity between the child and a member of the nuclear or extended family. Blood relationship is not required. Although the physical aspects of incest are similar to those of sexual abuse occurring outside the family, the emotional aspects for the child are substantially different. A child victim of incest suffers from a lack of appropriate parental care and protection. Most occurrences are never detected, and adult incest victims often report that they made no disclosures as children simply because they were not asked about sexual abuse.

There is a broad spectrum of sexually abusive behavior that may occur between an adult and child. It is not uncommon for an adult to progress through a range of behaviors which increase in physical intrusiveness to the child. The following case examples will illustrate the spectrum of child sexual abuse.

CASE 1

A 15-month-old boy was admitted to an intensive care unit for treatment of coma following uncontrolled seizures. On admission he was noted to be unresponsive, to have extensive retinal hemorrhages, perineal bruising, and anal tears. The history offered by the family on admission was that the boy had awakened from a nap, cried, and started having seizures that did not stop. Further exploration of the history showed that the child, with family approval, was in the care of family friends because they liked the child to visit. On further questioning the male adult caretaker stated that he had taken the patient for a bicycle ride and that the child had fallen off the handlebars. As further information was collected, the man's wife indicated that her husband had changed a great deal during the past few months. He had difficulty sleeping, increased isolation from his family, decreased sexual activity with his wife, and a recurrent dream about the patient coming to stay with them. When the patient came to visit, the man became secretive about his activities and insisted on being the sole caretaker for the 15-month-old boy. On further investigation it was found that the family friend had victimized the child repeatedly and had progressed from fondling to sexual assault, resulting in the child's perineal injuries and central nervous system damage. The child recovered but remained neurologically impaired. The child's parents continued to demonstrate inability to protect the child from the abuser so placement outside the home was made. The abuser was never prosecuted or treated. His family left him, fearing that he might injure them.

CASE 2

A 5-year-old boy was presented to an emergency room for treatment of a "rash around the anus." The history from the boy's father was that the eruption was noticed when the patient complained to his mother of itching. Initially it was thought that the lesions were excoriations secondary to scratching. Treatment included an antibiotic ointment. The problem did not resolve, and the child was returned by his family. A culture was obtained which was positive for *Neisseria gonorrhoeae*. Further carefully collected data from the child demonstrated that a 17-year-old cousin had been abusing him sexually

David G. Oldham, MD, and Frank E. Crumley, MD, Baylor University Medical Center, Dallas; Joan Hebeler, MD, and David A. Waller, MD, The University of Texas Health Science Center at Dallas; Dan Myers, MD, private practice, Dallas; John G. Looney, MD, Timberlawn Psychiatric Hospital, Dallas. Send reprint requests to Dr Oldham, 3707 Gaston Ave, No. 418, Dallas, TX 75246.

and had threatened to hurt him if the child told what was going on. The younger child responded to appropriate medical treatment and support from his parents. The adolescent was treated for significant psychiatric problems after evaluation by proper authorities.

CASE 3

"Katherine," the 16-year-old daughter of an executive, was seen in the emergency room following a runaway and suicide attempt by wrist cutting. A complete history taken by the pediatric resident led to the girl's disclosure of repeated sexual abuse by her father over the past ten years. The abusive behaviors began at age 4 when her father repeatedly watched her on the toilet and stood in front of her with his penis exposed. Over the next two years, the father fondled her and masturbated in front of her on a weekly basis. Between the ages of six and ten the fondling continued, and the father occasionally inserted a crayon or pen in her anus and vagina. With the onset of puberty, Katherine's father fondled her breasts and involved her in mutual masturbation. Many of the episodes occurred when he had been drinking heavily. The first episode of vaginal intercourse occurred at age 15 with repeated assaults for nearly a year on a monthly basis. Katherine's runaway and suicide attempt occurred after the father's insistence on anal intercourse. Katherine was admitted for inpatient psychiatric treatment of depression. Her father was later prosecuted and committed to an alcoholic rehabilitation program.

These case histories are taken from the clinical practices of the authors. They are real, and they are representative rather than extreme. Despite the sense of futility and outrage that such cases stir, there is much that can be done by physicians to decrease the morbidity of child sexual abuse.

The data in Figs 1 and 2 indicate that the perpetrators in sexual abuse cases are predominantly male and a larger percentage are found in the under-18-year and over-36-year categories. Statistics for 1985 indicate that no charges were filed against 44,787 alleged perpetrators of all forms of child abuse, criminal charges were filed against 2,607, charges were dropped for 67, convictions were returned for 140 perpetrators, and two were acquitted.

1. Ages reported for abuse and neglect are higher than for sexual abuse, and victims are predominantly female. Texas Department of Human Services data (4).

Child Abuse and Neglect 1981–1985						Sexual Abuse 1984–1985					
290,595 cases						18,129 cases					
Male: 48%						Male: 17%					
Female: 51%						Female: 83%					
Age											
< 1	1–3	4–6	7–9	10–12	13–17	< 1	1–3	4–6	7–9	10–12	13–17
8%	23%	20%	17%	15%	17%	.5%	12%	20%	19%	21%	27%

2. Descriptions of persons committing abuse and neglect and those committing sexual abuse. Texas Department of Human Services data (4).

Alleged Perpetrators Abuse and Neglect 1981–1985					Sexual Abuse 1984–1985				
226,522 cases					15,285 cases				
Age					Age				
< 18	18–25	26–35	36–45	45+	< 18	18–25	26–35	36–45	45+
4%	26%	41%	19%	10%	13%	15%	33%	24%	14%
Sex					Sex				
Male: 44%					Male: 92%				
Female: 56%					Female: 8%				
Ethnic Group					Ethnic Group				
Anglo: 58%					Anglo: 61%				
Black: 17%					Black: 15%				
Hispanic: 24%					Hispanic: 23%				
Other: 1%					Other: 1%				

Normal sexual development

It is beyond the scope of this paper to detail the normal sexual development of children. Some brief comments, however, about normality are necessary to put the topic of sexual abuse of children in perspective.

Sexual development begins at birth and involves a complex course of physical and cognitive maturation. Even very young children have "sexual" urges, although they are not experienced in the same way as by adults. These urges become directed toward the sexual organs at about five or six years of age. Prior to that, children can be observed to generate excitement through oral and bowel activities. Infants find great pleasure in oral activity which develops over time into the enjoyment of kissing and sucking as part of mature sexual expression. It would be quite normal for a three-year-old child to have great interest in the process of defecation. This kind of intense interest, however, would be abnormal in a school-age child or adolescent. A 5-year-old girl might feel stimulation by rubbing her genital area against her father's lap, but she could not understand in an adult way the meaning of an inappropriate response on his part.

Children commonly do, think, and say things that would be considered deviant or perverse in adults. Perhaps as a way of verifying physical differences between boys and girls, the old game of "playing doctor" occurs commonly among children of early school age. This type of exploratory behavior ends, however, as children develop a sense of modesty and a concept of right and wrong about the expression of sexual feelings. "Playing doctor" which involves penetration or occurs between children of

significantly different ages is not within the normal range of sexual behavior.

Adolescent sexual development is, of course, directed by an outpouring of hormones, but maturation of thought processes is also at work. Regression to the sexual behavior and thinking of younger children may be observed as a temporary phenomenon of early adolescence. The capacity for mature sexual expression and control should be achieved by late adolescence. It takes a longer time for the child to develop mature concepts of cause and effect, right and wrong, and the meaning of sexual feelings than it takes for the child to develop the physical capacity for sexual intercourse. The point to stress is that the course of sexual development is complicated and long. It involves experimentation into many areas of thought and action which would be considered abnormal in a mature adult. If an adult took advantage of these wide-ranging behaviors of a child, the adult would be fostering an abnormal situation which would certainly raise the question of sexual abuse.

Clinical manifestations

Although sexually abused children may make direct disclosures to a variety of persons, they commonly present to physicians with an array of behavioral indicators and physical complaints. None of these indicators and complaints is specific for sexual abuse, but each of them should alert the physician to this possibility. These "red flags" overlap age groups, but many of them cluster according to the developmental stage of the child. There are also indicators within the family that should heighten the physician's concern about incest. Those items near the top of each list (Fig 3) should elicit the greatest concern about possible sexual abuse. The presence of multiple "red flags" should likewise increase clinical concern.

Any sign of physical abuse in a child should alert the physician to the possibility of sexual abuse. Direct statements or indirect "joking" about sexual abuse by a child of any age must be taken seriously and fully explored. Psychiatric evaluation of the child may be indicated to assess the nature and seriousness of behavioral indicators which may be associated with treatable mental disorders.

History and physical examination of the child

The sexual abuse of young children confronts a strong universally held societal taboo. Physicians must be aware that their feelings may influence their actions as they evaluate victimized children. The anger often experienced by physicians must be recognized and set aside to be dealt with in a constructive manner. Historical data are collected from the family, child, and often others including protective services workers or the police. Most children over the age of three years are capable of giving a history concerning a recent incident. If this is an initial visit, the physician can spend a few minutes getting to know the child. This can usually be done by allowing the child to observe the examiner talking with the child's parent about neutral subjects. Preschoolers and younger school-aged children enjoy talking about pets, their play, and school activities while they explore the office or any toys there may be at hand.

Once rapport is established, it is usually possible to interview the child alone. In a nonthreatening manner it is useful to ask the children why they think they are being seen. The response given will guide the direction of the interview. It is important to remember that the child's perception of a sexual abuse incident may vary considerably from that of the adults involved, including the evaluating professional. If violence was not a part of the incident(s), the child may not be upset by the sexual encounter but will be disturbed by the interrogations, separation from the parents, including the abuser, and the examinations. After the initial clarifying questions about the visit, the child can usually simply be asked what happened, who put what where, with

3. Indicators that should heighten the physician's suspicion that sexual abuse has occurred. Items near the top of each list should elicit the greatest concern.

Preschool Children:
Sexually transmitted diseases (including AIDS)
Signs of physical abuse
Precocious, detailed sexual knowledge
Open, compulsive masturbation
Excessively seductive behavior toward adults
Excessively fearful behavior toward adults
Severe sleep disturbances
School-Age Children:
Sexually transmitted disease
Signs of physical abuse
Violent, abusive behavior
Clinical depression, suicidal behavior
Hysterical conversion reactions
Vague complaints of abdominal or perineal pain
Recent onset of enuresis or encopresis
"Pseudomature," inappropriate adult-like behavior
Adolescents:
Sexual abuse of younger children
Sexually transmitted disease, pregnancy
Promiscuity
Violent outbursts, self-mutilation
Clinical depression, suicidal behavior
Runaways
Hysterical conversion reactions, psychosis
Adult Family Members:
History of committing abuse
History of being abused
Alcohol and drug abuse
Serious mental disorder or retardation
Adults and children sleeping together at home
Sexual dysfunctions in parents

4. An approach to prophylaxis in children possibly exposed to sexually transmitted diseases.

Children who weigh less than 100 lbs (45 kg): Amoxicillin 50 mg/kg by mouth, Probenecid 25 mg/kg by mouth or Procaine penicillin 100,000 units/kg IM, Probenecid 25 mg/kg by mouth
Children who weigh more than 100 lbs (45 kg): Amoxicillin 3 gm by mouth, Probenecid 1 gm by mouth or Procaine penicillin 4.8 million units IM with Probenecid 1 g by mouth

appropriate follow-up on the child's answers. Children may be asked how they felt about what happened, if they were frightened or not, if they were given anything or threatened. The descriptions given by children must be carefully explored to be sure that the examiner understands the meaning of the words. Materials including drawings, toys and dolls (including anatomically correct dolls), can facilitate collection of historical data. The materials, however, are useful only if the physician is skilled in evaluating children, is comfortable with the materials, and is flexible in choosing items appropriate for the child. The physician who obtains a detailed history from a child can often state from the content of the interview that a child has or has not been sexually molested. The child's statements should be recorded exactly as they are said and in quotes rather than interpreted by the examiner.

The physician's verbal and nonverbal behaviors modify the quality and quantity of information given by the child. If the physician appears angry or worried, the child may become upset and assume responsibility for the adult's feelings. At some point in the interview the physician should explore the child's feelings, particularly guilt feelings. It should be explained to the child that he or she is not responsible for the abuse.

Collect factual information from the family and record any discrepancies between the stories presented. It is well to remember that the parents of the child who has been abused by someone outside of the household experience the same constellation of reactions as victims of any serious crime. The parents feel guilty, dirty and violated, and unsafe. Adults may experience somatic complaints including nightmares or vomiting. It may be difficult for parents to allow their child to resume normal activities. It is appropriate to spend most of the interview time with the parents because management of the initial crisis with the family will affect and benefit the child's recovery. On the other hand, in management of incest victims, the time with the family may be spent advising them of the need to report the problem in as supportive a manner as possible. The child involved in incest warrants special attention regarding feelings of guilt, responsibility for the family's problems, fears of retaliation or separation from the family.

Each child suspected of being sexually abused should have a thorough general physical examination including inspection of the external genitalia. If it is judged necessary that a pelvic examination be performed, the physician most experienced in doing pelvic examinations on children should be contacted to perform the evaluation. If there are obvious external injuries to the perineum, bleeding from the vagina or anus, or signs of intra-abdominal trauma, examination under general anesthesia is necessary with staff available to repair injuries. Analgesia is of limited value as it often serves to disorient the child who struggles, converting the examination into another assault. The establishment of rapport with the child is the best substitute for analgesia.

Most children involved in sexual encounters have no visible injuries because fondling, masturbation, oral-genital or nonassaultive genital-genital or anal-genital contact rarely produces clinical findings. Clinical findings may include bruises, swellings, lacerations, or tears of the perineum or anus. Chancres, anal ulcers, or vaginal or penile discharge may be present. The detection of sexually transmitted diseases in prepubertal children should be considered evidence of sexual abuse until proven otherwise (5). The detection of a pregnancy may also be the first manifestation of sexual abuse.

Collect laboratory test specimens during the physical examination. Throat, genital and anal cultures should be sent for culture for sexually transmitted diseases. Regarding culture for *Neisseria gonorrhoeae*, it is essential that tests be specific rather than "screening tests," for *N gonorrhoeae*. A positive nonspecific screening test can have serious implications for management of a child suspected of being abused, including inappropriate removal from home. Blood tests for syphilis should be obtained, depending upon availability of data from the abuser. If there is any doubt about the adult's identity, material for laboratory test should be obtained from the child to ensure proper medical care.

Specimens obtained for forensic examination, including clothing, aspirates, or smears for semen, fingernail scratchings, or combings for pubic hair should be handed to a police officer or placed in an envelope, sealed, signed and given to an officer or other official. Care must be taken to maintain a documented chain of evidence transfer by not leaving evidence unsupervised and by documenting all transfers by signature. Failure to maintain the documented transfers makes the evidence useless.

Sexually transmitted diseases are common and indicate the need to treat children who may be exposed to them, particularly when there is no adult available to culture or examine. The least assaultive and most effective treatment should be used. Fig 4 summarizes an approach to prophylaxis. Modifications must be made depending on the clinical status of the child (6).

Children who are under 8 years of age and are allergic to penicillin can be given spectinomycin (40 mg/kg intramuscularly). Children who are over 8 years of age and allergic to penicillin can be given tetracycline (40 mg/kg/day in four doses over five days). Clinical findings suggestive of vaginitis, proctitis, pharyngitis, or complicated forms should be treated as indicated.

All cases of suspected sexual abuse should be reported to the Texas Department of Human Services as required by law.

Associated mental disorders

Nearly every conceivable mental disorder has been reported to occur in association with childhood sexual abuse (7). Recent clinical studies confirm that the emotional trauma of sexual abuse may be severe. Gomes-Schwartz et al (8) reported on severity of emotional distress in 112 sexually abused children ranging in age from preschool to adolescent. Most had experienced sexual abuse within the six months prior to evaluation. The major finding was that, as a group, children who had recently been sexually abused showed more behavioral problems and more symptoms of emotional distress than did children in the general population, but less than seen in other children undergoing psychiatric treatment. The highest incidence of serious disturbances (40%) occurred in the school-age group. For these school-age children, common symptom patterns included serious difficulties with impulsive and destructive behaviors as well as severe fear response.

Adams-Tucker (9) evaluated a group of 25 sexually abused children and found a 68% incidence of severe emotional problems. Examples included an 8-year-old girl who masturbated neighborhood pets and was disruptive at school, a 4-year-old girl with severe nightmares, and a 14-year-old girl with daily crying spells and vomiting. Each of these children had been victims of incest with the father or stepfather.

Adolescent girls who have been involved in incest with father figures may be at particular risk for suicide attempts (10). Emslie and Rosenfeld reported a history of incest in 37.5% of female children and adolescents hospitalized for psychiatric prblems. A comparison of those with and without a history of incest, however, showed no specific effects of incest (11).

How is it that some children seem able to emerge from sexual abuse relatively unscathed, whereas others may have severe and lasting difficulties? Canavan (12) suggests that the following issues may be critical: (a) The closer the offender's relationship to the victim, the more probable are psychological sequelae; (b) The impact on the child victim is worse with increasing age of the child at the time of the abuse; (c) The child's reaction to violently forced rape is likely to be more severe than the reaction to "nontouching" or nonforced acts; (d) An isolated incident will have less impact than chronic recurring activity; (e) The reaction of the family may influence the impact on the child.

The type of psychiatric disorder likely to be found in the abuser depends to some extent on the type of sexual abuse that occurred. In cases of incest, the abuse must be understood in terms of disturbed family relationships as well as individual psychopathology. Alcoholism and drug abuse are commonly associated with incest (13). In the much less frequent situation of sexual abuse by a stranger, the offender may have a disorder known as pedophilia which is characterized by intense, compulsive sexual interest in children (14).

Legal aspects

Chapter 34 of the Texas Family Code (15) mandates that

> Any person having cause to believe that a child's physical or mental health or welfare has been or may be adversely affected by abuse or neglect shall make a nonaccusatory report to any local or state law enforcement agency, or to the Texas Department of Human Services. Any person so reporting is immune from liability, civil or criminal, provided that he is not reporting in bad faith or malice. A person who has knowledge of child abuse and does not report it has committed a Class B misdemeanor.

A class B misdemeanor is punishable by a maximum of six months in jail and/or a $1,000 fine. In September 1985 an addition was made to the code stating that all professionals licensed by the state, specifically doctors and psychologists, are required to report child abuse within 48 hours. It should also be noted that privileged communication is denied when child abuse is involved.

The Department of Human Services is charged with the protection of the abused child. With court order, it has the power to investigate, remove the perpetrator from the home, or take custody of the child. The Department of Human Services further may order and/or provide treatment for the family, the victim and the perpetrator, often a conflicted role, but primarily aimed at providing protection and treatment for the child. Sexual abuse of children is a crime. A law enforcement agency will also be notified when a report is made. The degree of involvement by the law enforcement agency is usually dictated by the likelihood of conviction of the perpetrator.

The law (16) defines all sexual contact or abuse of a child younger than 17 years of age as a felony provided that the offender is two years older than the victim. Offenders may be charged with:

> *Indecency with a child*, which includes touching a child's breasts, anus, or genitalia with intent to arouse, or exposing oneself to a child. Punishment is confinement in the Texas Department of Correction for not more than ten years or less than two years and a fine of not more than $5,000;

Sexual assault, the penetration of the anus or vagina of a child by any means or oral sex. Punishment is confinement for not more than twenty years or less than two years with a maximum $10,000 fine; or *Aggravated assault*, which includes the acts covered by indecency with a child and sexual assault but involves a victim younger than 14 years of age. Punishment is confinement for not more than 99 years of less than five years with a maximum fine of $10,000.

Condemning a child abuser to two to 99 years in prison may seem right at the time, but implementing such a course is conflicted when the abuser is a family friend, son of a colleague, or a long-term trusting patient. Equally stressing is the impact on the child who may be pressured by repeated questioning, grand jury hearings, trial testimony, and cross-examination. Further, the child may recant the history under overt or covert pressure from the family involved in incest (17). At best the decisions to be made regarding reporting are painful and complex. In spite of the preceding considerations, the physician is obligated to report. It is the only way to obtain information from all sources, including schools, neighbors, daycare centers, and other agencies. In the best of circumstances a report will result in a careful investigation by the Texas Department of Human Services, prompt involvement with the courts, and an appropriate treatment program for all involved. The physician can continue to provide service to the child and family until the situation is resolved.

The physician may be called to testify regarding the facts of a case. Carefully documented records are useful and provide information for the court as well as serve as the basis for formulating an opinion regarding the case. A reporting letter referring to the family code can document that the report was not made out of malice and is in compliance with the law.

Final comments

Sexual abuse of children is a medical problem of increasing importance in Texas. Physicians can play important roles in decreasing the morbidity associated with this problem. They can educate the public and their patients. They can consult with school and public agencies that deal with children and adolescents. The major role that physicians can play is to recognize the signs and symptoms of child sexual abuse and to respond in an appropriate manner as described in this article.

REFERENCES

1. AMA Diagnostic and Treatment Guidelines Concerning Child Abuse and Neglect. Council on Scientific Affairs. JAMA 254(6):796–800, 1985.

2. Kempe RS, Kempe CH: The Common Secret: Sexual Abuse of Children and Adolescents. New York, Freeman, 1984, pp 13–15.

3. Finkelhor D: Child Sexual Abuse: New Theory and Research. New York, Free Press, 1984, pp 23.

4. Texas Department of Human Services, Program Management and Support Division. Protective Services for Families and Children's Branch: Statistical Report. Austin, Tex, 1986.

5. Brant RS, Tisza VB: The sexually misused child. Am J Orthopsychiatry 47(1):80–90, 1977.

6. Report of the Committee on Infectious Diseases. Committee on Infectious Diseases, American Academy of Pediatrics, ed 12. Illinois, American Academy of Pediatrics, 1986, pp 70–80, pp 160–168.

7. Mrazek D, Mrazek P: Child maltreatment, in Rutter M, Hersov L (eds): Child and Adolescent Psychiatry: Modern Approaches, ed 2. Oxford, Blackwell Scientific Publications, 1985, pp 688–693.

8. Gomes-Schwartz B, Horowitz JM, Sauzier M: Severity of emotional distress among sexually abused preschool, school-age, and adolescent children. Hosp Community Psychiatry 36(5):503–508, 1985.

9. Adams-Tucker C: The unmet psychiatric needs of sexually abused youths: referrals from a child protection agency and clinical evaluations. J Am Acad Child Psychiatry 23(6):659–667, 1984.

10. Goodwin J: Suicide attempts in sexual abuse victims and their mothers. Child Abuse Negl 5:217–221, 1981.

11. Emslie GJ, Rosenfeld A: Incest reported by children and adolescents hospitalized for severe psychiatric problems. Am J Psychiatry 140(6):708–711, 1983.

12. Canavan JW: Sexual child abuse, in Ellerstein NS (ed): Child Abuse and Neglect: A Medical Reference. New York, John Wiley, 1981, pp 233–251.

13. Virkkunen M: Incest offences and alcoholism. Med Sci Law 14(2):124–128, 1974.

14. Araji S, Finkelhor D: Explanations of pedophilia: review of emprical research. Bull Am Acad Psychiatry Law 13(1):17–37, 1985.

15. Texas Family Code. Department of Human Resources. State of Texas, Sept 1983 and 1985.

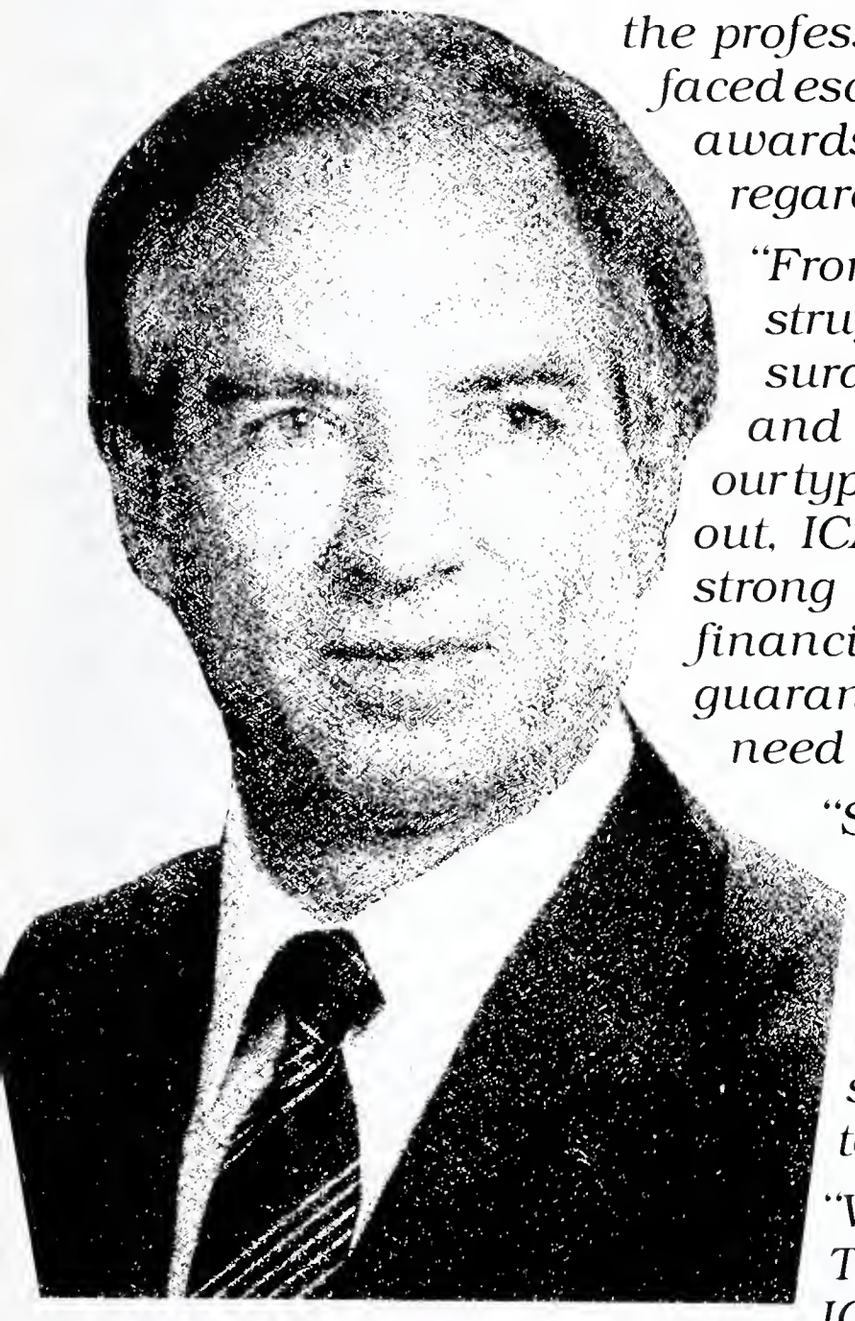
16. Texas Penal Code, State of Texas, Chapters 12, 21, 22.

17. Weiss EH, Berg RF: Child victims of sexual assault: impact of court procedures. J Am Acad Child Psychiatry 21(5):513–518, 1982.

ACKNOWLEDGMENT

The authors gratefully acknowledge Lawrence Claman, MD, for the concepts he contributed to this manuscript. The authors are members of the North Texas Society of Psychiatric Physicians.

"We Understand Your Frustration."



DOYLE N. ROGERS, MD, FCAP, JD
Chairman, President, CEO

"You don't need to be told how tough the last few years have been in the professional liability arena. You've faced escalating premiums, escalating awards and escalating frustrations, regardless who insures you.

"From our side of the table, we've struggled with diminishing reinsurance, exhorbitant claims costs and an industry-wide change in our type of insurance policy. Throughout, ICA has strived to maintain a strong balance sheet, because our financial stability is your only real guarantee that we'll be here if you need us.

"So, we made tough and sometimes, unpopular, decisions. But the bottom line is this: We've positioned ourselves as a strong force in the professional liability business, for today and tomorrow.

"We'll be here if you need us. That's what we both want. At ICA, we're committed to protecting your practice."

ICA
INSURANCE
CORPORATION
OF AMERICA

Houston, Texas (713) 871-8100
The Professional Liability Specialist

FRANCISCO PEREZ-GUERRA, MD

The treatment of obstructive sleep apnea

Francisco Perez-Guerra, MD, Division of Pulmonary Medicine, Sleep Disorders Section, Scott and White Memorial Hospital and Clinic, Scott, Sherwood and Brindley Foundation, Texas A&M University College of Medicine, Temple, Tex. Send reprint requests to Dr Perez-Guerra, Scott and White Sleep Disorders Center, Scott and White Memorial Hospital and Clinic, 2401 S 31st St, Temple, TX 76508.

The perfect treatment of obstructive sleep apnea (OSA) is yet to be found, but adequate treatment is available. Weight loss may suffice in mild forms of the disease. When daytime sleepiness is prominent or other potentially life-threatening complications exist, nasal continuous positive airway pressure (nasal CPAP) is the treatment of choice in most patients. Tracheostomy, the only previous effective treatment for severe OSA, has been rarely utilized or needed since the introduction of nasal CPAP. Uvulopalatopharyngoplasty is a compromise that may work well in carefully selected patients. Patients with significant narrowing of the posterior airway space may benefit from a variety of surgical procedures that reposition the tongue in a more forward position. Medications are of questionable value in OSA.

The exact incidence of obstructive sleep apnea (OSA) is not known, but it can no longer be considered an uncommon condition (1). The majority of patients with OSA are obese males and obese postmenopausal females. It is also seen in youngsters with adenotonsillar hypertrophy (2) and is common in patients with untreated primary hypothyroidism (3). Some maxillofacial abnormalities can cause OSA (4,5). Snoring and daytime somnolence are the most frequent symptoms of OSA, and the bed partner may describe silent episodes during which the patient exhibits no air flow but struggles to breathe (obstructive apnea) followed by snoring and snorting (reestablishment of air flow through a still partially obstructed airway). Sleep is fragmented because of the arousals that occur with practically every episode of apnea. Oxygen desaturation of variable degree and bradycardia-tachycardia sequences accompany the apneas.

The clinical impression of OSA frequently requires confirmation with nocturnal polysomnography (PSG). Polysomnography is the recording of multiple physiologic functions simultaneously. The most frequently recorded functions are oronasal air flow, intercostal electromyographic activity, respiratory effort (by strain gauges or inductance plethysmography), and oximetry. For sleep staging, the electroencephalogram, the electro-oculogram, and the submental electromyogram are utilized.

Polysomnography is indicated in patients with disabling daytime sleepiness and other psychosocial consequences of sleep deprivation. Polysomnography is prudent in patients with less severe symptoms but who exhibit diurnal hypoxemia since it is in patients with diurnal hypoxemia that right heart failure is likely to complicate OSA (6). Obese somnolent patients without significant peripheral air flow obstruction but with an elevated arterial PCO_2 (obesity hypoventilation syndrome) require polysomnography since their treatment involves correction of the underlying OSA from which they almost invariably suffer (7).

Treatment of OSA

NASAL CONTINUOUS POSITIVE AIRWAY PRESSURE (NASAL CPAP)

The introduction of air under low pressure (2 to 15 cm of water) through the nostrils, utilizing a tight fitting plastic mask, can prevent the periodic obstructions of the upper airway in OSA (8). Conceptually, nasal CPAP can be visualized as a pedestal of air resting on the larynx and preventing the collapse of the floppy walls of the tunnel between the nose and the trachea by a pneumatic splint effect. Nasal CPAP appears to be as effective as tracheostomy in the treatment of OSA (9,10). The abolition of the periodic apneas and the accompanying arousals (the likely reason for the daytime hypersomnolence) results in sustained sleep and rapid symptomatic improvement. Nasal CPAP is not a cure for OSA; it remains effective as long as it is used consistently. It is well accepted and tolerated by most OSA patients, but lack of compliance limits its effectiveness in some patients (10). The end expiratory pressure needed to abolish apneic episodes is established in the sleep disorders laboratory during nocturnal polysomnography; the minimal effective level is used. In our center, nasal CPAP is utilized in the following situations: severe daytime sleepiness, particulaly if present while driving, operating machinery, etc; obesity hypoventilation syndrome; obese patients with OSA who are symptomatic and who may require a considerable period of time to lose weight; inadequate improvement following surgical procedures to correct OSA; patients with medical conditions known to cause sleep apnea and who are moderately to severely symptomatic until control of the primary disease is achieved (eg, hypothyroidism and acromegaly); patients with conditions causing OSA who are not likely to improve with surgical procedures, medications, or weight loss.

The components of the nasal CPAP apparatus currently available in the US are shown in Fig 1.

TRACHEOSTOMY

Because the obstruction to the flow of air during sleep in OSA is located above the vocal cord level (its exact location varies) (11), tracheostomy eliminates the problem. Tracheostomy was until recently the only known effective treatment for patients with life-threatening or severely symptomatic OSA including the obesity hypoventilation syndrome. The medical and psychosocial complications of tracheostomy necessitated the development of alter-

native methods of treatment. Since the introduction of nasal continuous positive airway pressure we have only performed tracheostomy for the treatment of OSA in two patients, both of whom had very severe obesity hypoventilation syndrome and presented with overt right heart failure.

UVULOPALATOPHARYNGOPLASTY (UPPP)

UPPP is a controversial surgical procedure in the treatment of OSA (12). It was originally designed as an operation for snoring (13) but almost overnight, and without close scientific scrutiny, became a popular procedure for the treatment of OSA. It is an appealing concept since in effect it enlarges the oropharyngeal size and an abnormally small size of the upper airway appears to be an important factor in the pathophysiology of OSA (14). It is clear, however, that it does not work in every OSA patient (15) and that prediction of success is difficult at best (16). It is not likely to be effective in patients with a narrow posterior airway space (the space between the posterior aspect of the tongue and the posterior pharyngeal wall) since this area is not widened by the operation. Cephalometric analysis (17), somnofluoroscopy (18), and computerized tomography of the airway (8) are potentially useful procedures in predicting a successful outcome of UPPP in individual patients.

After UPPP, the signs and symptoms of OSA almost completely reverse in some patients; in others, while hypoxemia during sleep may improve, other signs and symptoms remain unchanged (15). UPPP cannot be considered a therapeutic panacea, but a compromise that may work well in carefully selected patients.

WEIGHT LOSS

Weight loss is always indicated in obese patients with OSA. A seemingly insignificant weight loss may result in significant subjective and objective improvement, sometimes a dramatic one (19). Our goal for every patient with OSA is ideal body weight since we feel that in months or years the OSA may recur at a lower (but still excessive) body weight.

DRUG TREATMENT

A medical cure for OSA does not exist. Protriptyline (Vivactil) may improve OSA by increasing the tone of the muscles of the upper airway (hypotonia of these muscles during sleep is one of the factors of the airway occlusion that occurs in OSA) and by reducing the amount of time patients with OSA spend in REM sleep (when obstructive apneas may be most severe) (20). Treatment with protriptyline can be used as a stopgap measure, but should not be relied upon in the treatment of patients with severe obstructive sleep apnea.

Medroxyprogesterone acetate, a respiratory stimulant, has been used with variable success in the obesity hypoventilation syndrome, but it does not improve the breathing disorder during sleep in OSA (21).

OTHER CONSIDERATIONS

Significant improvement of OSA can occur after treatment of conditions causing obstructive nasal breathing (eg, rhinitis medicamentosa, vasomotor or allergic rhinitis, and nasal polyposis) (22). Patients with OSA should refrain from alcohol and other central nervous systems depressants, including hypnotics (23).

Obstructive sleep apnea may occur predominantly and sometimes exclusively in the supine position (24). Such patients should be taught to avoid the supine position during sleep.

Narrowing of the posterior airway space can be seen in patients with maxillofacial abnormalities (eg, retrognathia or micrognathia). These patients may benefit from a variety of surgical procedures that reposition the tongue in a more forward position (25).

Marked adenotonsillar hypertrophy can cause obstructive sleep apnea (2). This occurs predominantly in children but can be seen in young adults and later in life. A somewhat controversial situation is that of a child with behavioral problems who snores and who exhibitis some degree of adenotonsillar hypertrophy. We believe that because OSA may *not* explain the problem, polysomnography is indicated before tonsillectomy is performed. If OSA exists, or if the inspiratory effort is clearly excessive, tonsillectomy is probably indicated.

The tongue-retaining device and other orthodontic devices have shown promise in the treatment of

1. Nasal continuous positive airway pressure apparatus currently in use in the United States. It consists of a flow generator, a threshold resistor positive end expiratory valve, wide bore tubing, and a plastic mask. The mask is kept in place by four bands that can be adjusted in length. Similar systems by other manufacturers are now entering the market.

snoring and OSA, yet their place in therapy is not well defined (26).

Who to treat . . . and with what? The house is still divided on these issues. For example, the apnea index (number of apneic episodes per hour of sleep) has been used to define "significant" disease. We prefer not to define disease or its severity based on a particular laboratory value. In making this assessment we take into consideration all of the following: the severity of impairment as expressed by the patient and his or her observers, the findings on a detailed general medical evaluation, appropriate laboratory studies including arterial blood gas analysis and spirometry when indicated, polysomnographic evidence of sleep disruption by the apneas, the emergence of cardiac arrhythmias during apneas, and more than trivial oxygen desaturation during apneas. While oxygen desaturation is an important consideration, severely symptomatic OSA can occur in its absence. Fig 2 outlines suggested guidelines for evaluating and treating patients with possible OSA.

Modifications will undoubtedly occur as more information becomes available about OSA itself, as more is learned about the current methods of treatment, and as newer methods of treatment emerge.

REFERENCES

1. Lavie P: Sleep apnea in industrial workers, in Guilleminault C, Lugaresi E (eds): Sleep/Wake Disorders: Natural History, Epidemiology and Long-Term Evolution. New York, Raven Press, 1983, pp 127–136.

2. Mauer KW, Staats BA, Olsen KD: Upper airway obstruction and disordered nocturnal breathing in children. Mayo Clinic Proc 58(6):349–353, 1983.

3. Rajagopal KR, Abbrecht PH, Derderian SS, et al: Obstructive sleep apnea in hypothyroidism. Ann Intern Med 101(4):491–494, 1984.

4. Wilms D, Popovich J, Conway W, et al: Anatomic abnormalities in obstructive sleep apnea. Ann Otol Rhinol Laryngol 91(6 Pt 1):595–596, 1982.

5. Coccagna G, Di Donato G, Verucchi P, et al: Hypersomnia with periodic apneas in acquired micrognathia. A bird-like face syndrome. Arch Neurol 33(11):769–776, 1976.

6. Bradley TD, Rutherford R, Grossman RF, et al: Role of daytime hypoxemia in the pathogenesis of right heart failure in the obstructive sleep apnea syndrome. Am Rev Respir Dis 131(6):835–839, 1985.

7. Sullivan CE, Berthon-Jones M, Issa FG: Remission of severe obesity-hypoventilation syndrome after short-term treatment during sleep with nasal continuous positive airway pressure. Am Rev Respir Dis 128(1):177–181, 1983.

8. Sullivan CE, Issa FG, Berthon-ones M, et al: Reversal of obstructive sleep apena by continuous positive airway pressure applied through the nares. Lancet 1(8225):862–865, 1981.

9. Sanders MH: Nasal CPAP effect on patterns of sleep apnea. Chest 86(6):839–844, 1984.

10. McEvoy RD, Thornton AT: Treatment of obstructive sleep apnea syndrome with nasal continuous positive airway pressure. Sleep 7(4):313–325, 1984.

11. Haponik EF, Smith PL, Bohlman ME, et al: Computerized tomography in obstructive sleep apnea. Correlation of airway size with physiology during sleep and wakefulness. Am Rev Respir Dis 127(2):221–226, 1983.

12. Fujita S, Conway W, Zorick F, et al: Surgical correc-

2. Suggested guidelines for evaluating and treating patients with possible obstructive sleep apnea

Clinical Situation	Sleep Laboratory Evaluation	Treatment
Obese, normotensive, asymptomatic except for snoring. Hypoxemia absent, or minimal.	Not indicated initially	Weight loss*, counseling (includes explanation of risks of obesity, possible consequences of sleep apnea, avoidance of alcohol and other CNS depressants at bedtime, avoidance of supine position, etc).
Normotensive. Bed partner gives a history compatible with OSA, degree of daytime impairment due to somnolence difficult to quantitate clinically.	PSG† if the patient is hypoxemic on room air in the awake state. MSLT† is a consideration in some patients to assess the severity of sleepiness.	Weight loss if obese. Counseling. May require nasal CPAP†, UPPP†, or protriptyline.
Moderate to severe impairment due to the effects of suspected OSA.	PSG Nasal CPAP trial on same or subsequent night.	Weight loss if obese. Nasal CPAP until desired weight is achieved, clinical and laboratory reevaluation then. UPPP is a consideration.
Obesity hypoventilation syndrome.	PSG Nasal CPAP trial	Weight loss.‡ Nasal CPAP. Tracheostomy in life-threatening disease, if intolerant of nasal CPAP or unreliable. Medroxyprogesterone acetate may be useful.

* While most patients with OSA are obese, the disease can occur in thin patients as well.

† PSG, nocturnal polysomnography; MSLT, multiple sleep latency test (objective measurement of excessive somnolence); nasal CPAP, nasal continuous positive airway pressure; UPPP uvulopalatopharyngoplasty.

‡ A gastric reduction operation should be considered in patients with severe OSA and OHS that have failed serious efforts to lose weight.

tion of anatomic abnormalities in obstructive sleep apnea syndrome: uvulopalatopharyngoplasty. Otolaryngol Head Neck Surg 89(6):923–934, 1981.

13. Ikernatsu T: Study of Snoring. 4th Report: Therapy (in Japanese). J Jpn Otorhinolaryngol 64:439–469, 1964.

14. Bradley TD, Phillipson EA: Pathogenesis and pathophysiology of the obstructive sleep apnea syndrome. Med Clin North Am 69(6):1169–1185, 1985.

15. Conway W, Fujita S, Zorick F, et al: Uvulopalatopharyngoplasty. One-year followup. Chest 88(3):385–387, 1985.

16. Riley R, Guilleminault C, Simmons FB: Palatopharyngoplasty in the treatment of obstructive sleep apneic patients, in Guilleminault C, Lugaresi E (eds): Sleep/Wake Disorders. Natural History, Epidemiology and Long-Term Evolution. New York, Raven Press, 1983, pp 163–169.

17. Riley R, Guilleminault C, Herran J, et al: Cephalometric analyses and flow-volume loops in obstructive sleep apnea patients. Sleep 6(4):303–311, 1983.

18. Katsantonis GP, Walsh JK: Somnofluoroscopy: its role in the selection of candidates for uvulopalatopharyngoplasty. Otolaryngol Head Neck Surg 94(1):56–60, 1986.

19. Smith PL, Gold AR, Meyers DA, et al: Weight loss in mildly to moderately obese patients with obstructive sleep apnea. Ann Intern Med 103(6 Pt 1):850–855, 1985.

20. Smith PL, Haponik EF, Allen RP, et al: The effects of protriptyline in sleep-disordered breathing. Am Rev Respir Dis 127(1):8–13,1983.

21. Rajagopal Kr, Abbrecht Ph, Jabbari B: Effects of medroxyprogesterone acetate in obstructive sleep apnea. Chest 90(6):815–821, 1986.

22. Zwillich CW, Pickett C, Hanson FN, et al: Disturbed sleep and prolonged apnea during nasal obstruction in normal men. Am Rev Respir Dis 124(2):158–160, 1981.

23. Krol RC, Knuth SL, Bartlett D Jr: Selective reduction of genioglossal muscle activity by alcohol in normal human subjects. Am Rev Respir Dis 129(2):247–250, 1984.

24. Cartwright RD: Effect of sleep position on sleep apnea severity. Sleep 7(2):110–114, 1984.

25. Riley R, Guilleminault C, Powell N, et al: Palatopharyngoplasty failure, cephalometric roentgenograms, and obstructive sleep apnea. Otolaryngol Head Neck Surg 93(2):240–244, 1985.

26. Cartwright RD: Predicting response to the tongue retaining device for sleep apnea syndrome. Arch Otolaryngol 111(6):385–388, 1985.

DO YOU KNOW A DOCTOR— WHO NEEDS OUR HELP?

If you can answer "yes" to any one of the questions below:

Do you know a doctor who—

- is experiencing problems **coping** with patients or with the normal stress of a busy practice?
- becomes easily **depressed** or easily annoyed?
- **drinks** more than a moderate amount?
- is self-prescribing mood-altering **drugs?**

—then, you may know a doctor who needs our help. If you feel that you, a colleague, a resident or student need counseling or treatment, won't you give us an opportunity to help? (Strictly confidential contacts can be made through our HOTLINE. Call us collect, anytime.)

HOTLINE—512 477-5575

TMA Committee on
Physician Health & Rehabilitation

David C. Eiland, Jr., M.D., Galveston,
Chairman
(409) 761-4776
Richard L. Weddige, M.D., Lubbock,
Vice Chairman
(806) 743-2800
G. Hulse Wagner, M.D., Wichita Falls
(817) 766-3551
Guy K. Driggs, M.D., Dallas
(214) 941-3313
Neal H. Gray, M.D., San Antonio
(512) 697-9792
A. Bryan Spires, Jr., M.D., Lubbock
(806) 743-2929
Thomas H. Allison, M.D., Mabank
(214) 590-8761
Gretchen L. Megowen, M.D., Dallas
(214) 696-8227
Adib R. Mikhail, M.D., Houston
(713) 440-4911
Scott Conrad, M.D., Irving,
Resident Representative
(214) 401-1609
Mrs. Elmer Vogelpohl, Galveston,
Auxiliary Representative
(409) 744-3826
Misty Dawn Laughlin, Temple,
Student Representative
(817) 778-4810
Alan McCorkle, Lubbock,
Alternate Student
Representative
(806) 797-2229

PAUL BUNNELL, MD

JOEL RICHTER, MD

Spontaneous rupture of the distal esophagus—Boerhaave's syndrome

Paul Bunnell, MD, Internal Medicine, The Port Lavaca Clinic, 1200 N Virginia St, Port Lavaca, TX 77979; Joel Richter, MD, Bowman Gray School of Medicine, Department of Medicine, Division of Gastroenterology, 300 S Hawthorne Rd, Winston-Salem, NC 27103.

Boerhaave's syndrome (spontaneous rupture of the esophagus) is a problem of both historical and current medical interest. The case of a 58-year-old man illustrates the confusing presentation of esophageal rupture. The key to diagnosis depends on being familiar with the disorder in the evaluation of chest and upper abdominal pain. Subtle radiographic findings of mediastinal emphysema and appropriate pleural fluid analysis (brown color, elevated amylase, pH < 6.0) provide clues to an early diagnosis.

Boerhaave's syndrome (spontaneous rupture of the distal esophagus) is classically described as presenting as epigastric or chest pain and circulatory collapse following forceful emesis (1). A review of the literature, however, reveals that such rupture commonly presents in an obscure fashion. Because the high mortality of this condition is directly linked to time of discovery, it should enter all clinicians' differential diagnosis of chest or upper abdominal pain. We describe a case that demonstrates the variability in presentation, clues to diagnosis, and need for urgent therapy in this life-threatening disorder.

Case report

A 58-year-old white man was admitted to the hospital three hours after the acute onset of midepigastric and substernal chest pain. The pain was described as a "hard tightness" with radiation into the neck and shoulders. The patient was dyspneic and nauseated. He reported retching but no vomiting prior to the onset of pain. He reported a 40-year history of smoking and described moderate alcohol intake on weekends. He had been treated for a duodenal ulcer in 1969, but described no recent health problems.

On examination the patient was a moderately obese man who was pale and diaphoretic. His temperature was 96.0° F (35.5° C), pulse 100, and respirations 32. The blood pressure was 140/90 mm Hg. Other remarkable findings included bibasilar inspiratory rales, S_3 gallop, and marked tenderness over the lower sternum and midepigastrium. Bowel sounds were normally active. Laboratory studies revealed a white-cell count of 6,300 with a left shift. The hemoglobin level, platelet count, and serum electrolytes determinations were normal. The electrocardiogram revealed ST segment elevation in leads II, III and aVF. A chest roentgenogram was normal. The patient was admitted to the coronary care unit with the diagnosis of acute inferior myocardial infarction.

The morning after admission, the patient complained of increasing shortness of breath. His temperature had increased to 101° F (38.3° C), and chest examination revealed absent breath sounds on the right. Arterial blood gas determinations were pH 7.30, PCO_2 42 mmHg, PO_2 62 mm Hg, and oxygen saturation 89%. A chest roentgenogram (Fig 1) revealed a right hydropneumothorax with leftward tracheal deviation. A chest tube was placed with drainage of 500 cc of brown serosanguinous fluid. Laboratory analysis revealed the fluid to be exudative with a protein level of 3.4 g/dL (34 g/L) and a lactate dehydrogenase level of 348 mg/dL. The pleural fluid glucose was 194 mg/dL (10.8 mmol/L), the white-cell count 13,000, and the red-cell count 3,000. A Gram's stain revealed 2+ white cells and large gram-positive cocci consistent with yeast.

The patient continued to be febrile and complained of abdominal pain. Abdominal examination revealed moderate distention with rebound, guarding, and absent bowel sounds. An upright abdominal roentgenogram revealed the presence of subdiaphragmatic air. At this time, now 36 hours after presentation, the patient was taken to surgery for an exploratory laparotomy. An anterior perforation of the duodenal bulb had occurred and an antrectomy was performed. During the vagotomy procedure, a distal esophageal perforation was discovered. The patient tolerated a thoracotomy procedure and closure of the esophageal defect. He was stable until the third postoperative day when adult respiratory distress syndrome developed and led to his death.

Discussion

Boerhaave's syndrome, or spontaneous rupture of the esophagus, describes esophageal perforation occurring secondary to prolonged or forceful vomiting. The illness is of historical medical interest as its namesake, Hermann Boerhaave, was the designer of our contemporary medical school curriculum. As court physician of the Netherlands in the early 1700s, he published several textbooks, including the description of an obese admiral's rapid demise following a large meal and vomiting. In this treatise, "Atrocis nec descripti prius, morbia historia,"* Boerhaave utilized the format of history and physical examination to generate a differential diagnosis concerning the admiral's illness. An esophageal rupture was discovered during an autopsy Boerhaave personally performed. By this example, he introduced the classic case presentation format as it is known today (2).

Boerhaave's syndrome is an uncommon problem. Over a 21-year period at Massachusetts General Hospital, only 85 cases were identified (3). Likewise, a compilation of data from teaching hospitals

*Grevious Illness Not Previously Described. H. Boerhaave, 1724.

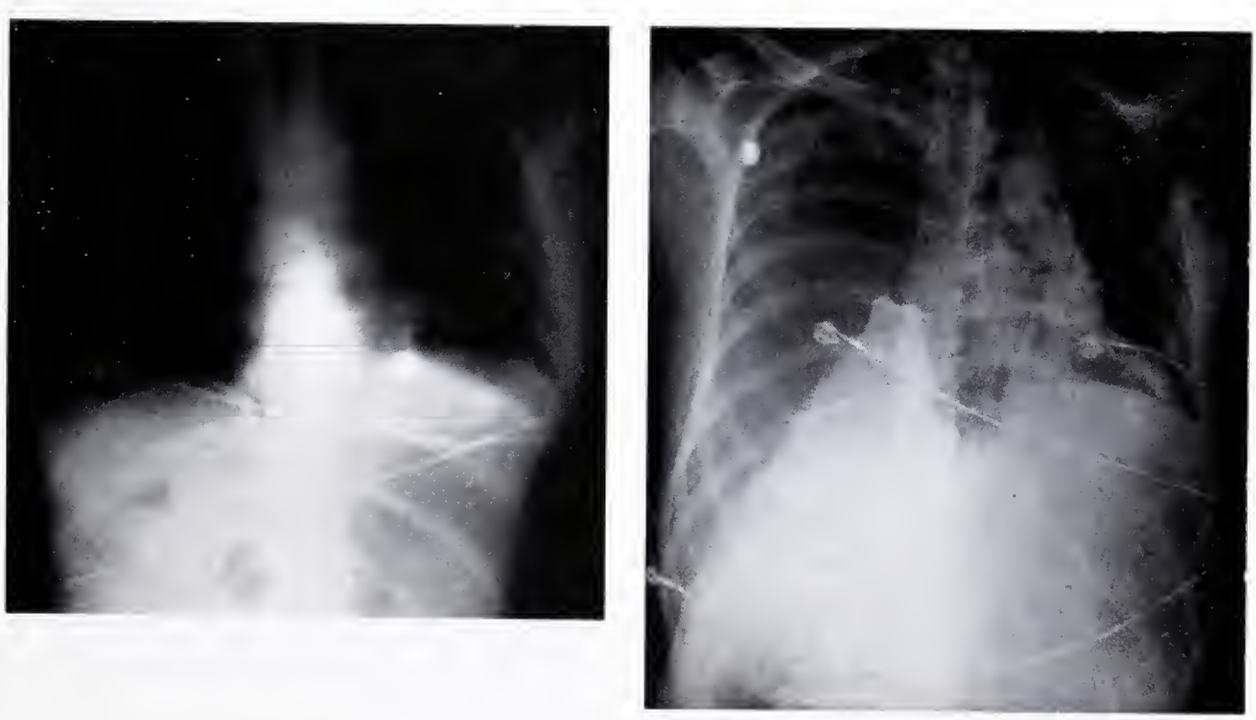
at Emory University yielded only 47 cases over a 20-year period (4).

Transmural esophageal disruption occurs as a perforation more commonly than rupture. Perforation most often occurs as a complication of instrumentation or invading tumor. Such instrumentation includes Blakemore tube placement, endoscopy, dilatation procedures, removal of foreign bodies, and use of obturator airways. Conditions other than emesis associated with esophageal rupture include seizures, parturition, defecation,and blunt abdominal trauma (5–8). Many cases are found to have both rupture from vomiting and perforation from distal esophageal disease as contributing factors.

An understanding of the physiology of emesis explains the etiology of esophageal rupture. Higher than normal pressures occur when a full stomach is available to receive the transmitted force or when the esophageal inlet widening is not coordinated with the vomitus being ejected. The latter circumstance is thought to occur with prolonged episodes of vomiting (8). Most ruptures occur approximately 3 cm above the gastroesophageal junction on the left wall of the esophagus and are 2 to 3 cm in length. Rupture at this anatomic location may be explained by the relatively thin fiber structure found where the smooth muscle of the distal left esophagus terminates as it meets the sturdier gastric musculature (9).

Clinical symptoms of esophageal perforation result from contamination of the mediastinum with gastric and oropharyngeal contents. The most common symptom is the acute onset of severe precordial or epigastric pain. This pain is almost universally pleuritic and commonly radiates to the shoulders or back. A history of vomiting is present in the majority of patients, although there maybe a poor correlation between emesis and the onset of pain (10). Hematemesis is noted in approximately 50% of patients in whom vomiting occurs (4). Dyspnea is a prominent complaint and may be followed by the onset of fever. The presence of subcutaneous emphysema following vomiting is very suggestive of esophageal perforation. This finding initially occurs in the suprasternal notch, but unfortunately is rarely seen in the first 12 hours (3,8). Retrosternal crackling on cardiac auscultation (Hamman's sign) is a similar indicator of mediastinal emphysema (11). As in our case, rupture of the mediastinal parietal pleura and pneumothorax may occur. This most commonly develops six to 18 hours after the onset of pain (8). Epigastric tenderness is found in greater than 50% of patients and upper abdominal distention and rebound in 25%. So prominent are abdominal complaints and signs that up to 20% of patients undergo exploratory laparotomy prior to discovery of their esophageal disruption (4).

Patients with esophageal rupture have variable findings on chest radiographs. Mediastinal widening may be the first clue. A more subtle early finding is the so-called "V" sign of Naclerio (Fig 2) (12). This occurs secondary to a localized mediastinal emphysema dissecting along the fascial planes of the mediastinal and diaphragmatic pleura in the region of



1. Patient's admission chest roentgenogram (left) compared to a chest roentgenogram taken 16 hours after admission following the onset of severe dyspnea (right). Note the right-sided hydropneumothorax in the second film.

the lower esophagus. Pleural effusions develop in 70% of patients. In 90% of cases, initial left-sided involvement occurs; however, spread to the right pleural cavity commonly ensues (13). When the parietal pleura is penetrated, a pneumothorax develops. This occurs in approximately 25% of patients and has the same predilection for left-sided involvement (3).

Pleural fluid evaluation is the most helpful diagnostic laboratory tool. Analysis reveals the fluid to be exudative and to have a characteristic brown color (4,13). The pleural fluid amylase level serves as the most sensitive and specific indicator of rupture (13). In a series of seven patients with esophageal rupture of at least 24 hours' duration, the pleural fluid amylase was elevated in 100% (4). The amylase originates from the salivary glands and enters the pleural space via the esophageal defect (15). A case of low pleural fluid amylase in a patient with Sjögren's syndrome and esophageal rupture adds support to these findings (16). A pleural fluid pH of less than 6 is also a specific indicator of esophageal rupture; however, its sensitivity is only 50% (17,4). Other diagnostic clues may be revealed with pleural fluid Wright's stain for squamous epithelial cells and food particles (19).

The degree of morbidity associated with esophageal rupture is most dependent on the time to diagnosis and treatment. The lowest mortality occurs in patients with rupture discovered within 12 hours. Unfortunately, such early diagnosis is uncommon, being made in only 20% of patients in one large series (4). When the physician's index of suspicion is raised, a radiographic contrast swallow should be performed on an emergency basis. The Gastrografin (meglumine diatrizoate) study will reveal a diagnosis in 85% to 90% of patients (4,10,20). When treatment is delayed beyond 24 hours, mortality may exceed 60% because of poor surgical closure of acid-damaged tissue, overwhelming sepsis, and the development of adult respiratory distress syndrome.

Management of esophageal rupture requires hemodynamic support, broad-spectrum antibiotics, thoracotomy for drainage of the mediastinal and pleural spaces, and esophageal closure. Cases discovered in less than 24 hours are repaired both directly and via a pleural or diaphragmatic patch (10,21). Cases diagnosed beyond 24 hours often require some additional form of esophageal exclusion. One technique consists of a Levine tube or pharyngostomy to bypass salivary secretions with a gastrostomy to control reflux of gastric secretions (10). Another approach is a T-tube system to protect the anastomosis from esophageal and gastric secretions (4). Without such diversion procedures, tissue necrosis and breakdown is likely to occur. In all cases of esophageal rupture, early nutritional support is mandatory.

Boerhaave's syndrome is a serious problem with a variety of clinical presentations. It should be part of both the physician's and surgeon's differential diagnosis of chest and epigastric pain. As illustrated by our case, delay in diagnosis is most commonly due to a wrong initial diagnosis (ie, myocardial infarction, peptic ulcer disease, pericarditis, pancreatitis),

2. The "V" sign of Naclerio caused by the dissection of mediastinal emphysema in the area of the left lower esophagus. Taken from E. A. Naclerio's, "The V-sign in the diagnosis of spontaneous rupture of the esophagus" (12); with permission of Yorke Medical Group Publishers.

3. Characteristics of Boerhaave's syndrome.

History:
Recent emesis, seizure, sudden increase in intra-abdominal pressure (ie defecation, auto accident)
Pleuritic retrosternal or epigastric pain
Hematemesis
Dyspnea
Fever

Physical Examination:
Suprasternal subcutaneous emphysema
Hamman's sign
Basilar rales with progression to dullness*
Epigastric tenderness

Chest Roentgenogram:
"V" sign of Naclerio
Mediastinal widening
Mediastinal or subcutaneous air
Pleural effusion*
Pneumothorax*

Pleural Fluid Analysis:
Brown color
Amylase elevation
pH < 6.0
Food particles or squamous epithelial cells (Wright's stain)

*Left-sided predominance

being unacquainted with the disease, lack of correlation of vomiting with the onset of pain, and failure to recognize the importance of brown pleural fluid or to obtain a pleural fluid amylase and pH value. As discussed in this article, a number of clues are suggestive of esophageal rupture (Fig 3). Although an unusual clinical entity, delay in the diagnosis often has dire consequences. This report illustrates the protean manifestations of Boerhaave's syndrome, the importance of being acquainted with its existence, and the clinical clues to a rapid diagnosis.

REFERENCES

1. Mackler SA: Spontaneous rupture of the esophagus: an experimental and clinical study. Surg Gynecol Obstet 95:345–356, 1952.

2. Derbes VJ, Mitchell RE: Hermann Boerhaave's atrocis, nec descripti prius, morbi historia, the first translation of the classic case report of the rupture of the esophagus, with annotations. Bull Med Libr Assoc 43:217–240, 1955.

3. Michel L, Grillo HC, Malt RA: Operative and nonoperative management of esophageal perforations. Ann Surg 194(1):57–63, 1981.

4. Abbott OA, Mansour KA, Logan WD, et al: Atraumatic so-called "spontaneous" rupture of the esophagus. J Thorac Cardiovasc 59:67–83, 1970.

5. Klein L, Grossman M: Rupture of esophagus. M Bull Veterans Admin 19:277–283, 1943.

6. Kennard HWH: Rupture of esophagus during childbirth. Brit Med J 1:417, 1950.

7. Whipple AO, St John FB (eds): Nelson New Loose Leaf Surgery, vol 4. New York, Thomas Nelson and Sons, 1941, pp 155–156.

8. Tidman MK, John HT: Spontaneous rupture of the esophagus. Br J Surg 54:286–292, 1967.

9. Mosher HP: Lower end of esophagus at birth and in adult; Semon lecture for 1929. J Laryngol Oto 45:161–180, 1930.

10. Patton AS, Lawson DW, Shannon JM, et al: Reevaluation of the Boerhaave syndrome. A review of fourteen cases. Am J Surg 137(4):560–565, 1979.

11. Curci JJ, Horman MJ: Boerhaave's syndrome: the importance of early diagnosis. Ann Surg 183:401–408, 1976.

12. Naclerio EA: The V sign in the diagnosis of spontaneous rupture of the esophagus (an early roentgen clue). Am J Surg 93:291–298, 1957.

13. Light RW: Pleural Diseases. Philadelphia, Lea and Febiger, 1983, p 158.

14. Sherr HP, Light RW, Merson MH, et al: Origin of pleural fluid amylase in esophageal rupture. Ann Intern Med 76:985–986, 1972.

15. Rudin JS, Ellrodt AG, Phillips EH: Low pleural fluid amylase associated with spontaneous rupture of the esophagus. Arch Intern Med 143(5):1034–1035, 1983.

16. Dye RA, Laforet EG: Esophageal rupture: diagnosis by pleural fluid pH. Chest 66(4):454–456, 1974.

17. Good JT Jr, Taryle DA, Maulitz RM, et al: The diagnostic value of pleural fluid pH. Chest 78(1):55–59, 1980.

18. Eriksen KR: Oesophagopleural fistula diagnosed by microscopic examination of pleural fluid. Acta Chir Scand 128:771–777, 1964.

19. del Castillo J, Boyar C, Hess F, et al: Atraumatic panmural rupture of the esophagus: Boerhaave syndrome. Ann Emerg Med 12(6):385–390, 1983.

20. Westaby S: An improved method for primary repair after spontaneous oesophageal perforation. Br J Surg 67(11):801–803, 1980.

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS MEDICAL LIABILITY TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

Depressed and anxious, she's sitting out life instead of living it

From "looking"...

ROCHE® Copyright © 1987 by Roche Products Inc. All rights reserved.

to "living"...

FOR FAST RELIEF OF MODERATE DEPRESSION AND ANXIETY

See the difference in the first week[1]

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

PROTECT YOUR DECISION. WRITE "DO NOT SUBSTITUTE."

Please see summary of product information on adjacent page.

FROM LOOKING...TO LIVING...

to smiling again!

The rewards of Limbitrol

In moderate depression and anxiety:

- Rapid results—62% of total four-week improvement within a week versus 44% with amitriptyline[1]
- Earlier relief of associated somatic complaints[2]
- Fewer dropouts due to side effects—only ⅓ the rate of those patients taking amitriptyline, although the incidence of side effects is comparable[1]
- Fast improvement with less amitriptyline—⅓ to ½ the dose of patients taking amitriptyline alone[3]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

SEE THE DIFFERENCE IN THE FIRST WEEK[1]

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ Ⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ Ⓥ

PROTECT YOUR DECISION. WRITE "DO NOT SUBSTITUTE."

References: 1. Feighner JP, *et al: Psychopharmacology* 61 217-225, Mar 22, 1979. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Dixon R, Cohen J: *J Clin Psychopharmacol* 3:107-109, Apr 1983.

Limbitrol® Ⓒ Ⓥ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and mine menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestations and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly.

Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: *Double strength (DS) Tablets*, white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets*, blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 50.

ROCHE®
ROCHE PRODUCTS INC.
Manati, Puerto Rico 00701

PI 058

MUBARIZ NAQVI, MD
ANITA L. CARROLL, RNC, MSN
WILLIAM McCUE, MD
ROLF HABERSANG, MD

Zinc deficiency in a breast-fed infant

Zinc deficiency presented as severe diaper rash, irritability, and diarrhea in a breast-fed, low birth weight infant at two months of age. This was apparently due to low zinc levels in maternal serum and milk. Symptoms responded to oral zinc supplements (15 mg/day) in the infant. Maternal serum and milk values also became normal after zinc supplementation.

The concentration of zinc in colostrum is very high, averaging 825 mcg/dL (1), and diminishes as lactation progresses. Human milk zinc levels have been reported to be 400 mcg/dL in the second week of lactation and 4.8 mcg/dL after 35 to 37 weeks of lactation (2). The zinc content of commonly used formulas varies from 500 mcg/100 Kcals to 1,500 mcg/100 Kcals. The "special care" formulas have higher values that are sufficient to meet the daily requirement of low birth weight infants (3).

Acrodermatitis enteropathica, a zinc deficiency syndrome, is associated with stunted growth, extreme irritability, poor hair growth, skin rash, diarrhea, thymic atrophy, defective cell-mediated immunity and abnormal white blood cell chemotaxis. These manifestations occur at serum zinc levels less than 35 mcg/dL (4).

Diarrhea, edema, irritability, and rash on pressure-exposed areas, have been described in infants who were fed exclusively human milk (5–7). Recent reports describe zinc deficiency in premature infants receiving total parenteral nutrition without trace mineral supplementation (8).

We describe a case of acquired zinc deficiency in a breast-fed premature infant whose mother's serum and milk zinc levels were low. The mother and infant responded to oral zinc therapy, as a daily intake of 30 mg zinc brought the serum and human milk zinc levels into normal range (Fig 1).

Report of a case

A male infant was assessed to be 28 weeks' gestation appropriate for gestational age by Ballard score. Birth weight was 980 g. Total parenteral nutrition, given from day four through 48, was supplemented by intravenously administered zinc at 1 mg/24 hours. Intralipid was infused from day eight through 46. Breast milk feedings at 0.5 cc/hour were started by continuous orogastric infusion and increased gradually in strength and amount. By the 47th day, the infant tolerated 15 cc of human milk every three hours. He began to receive total human milk feedings when total consumption reached 120 cc/kg/day. At this time, an oral multivitamin supplement (without iron) of 0.5 cc/day was also started.

Seventeen days later, episodes of loose stools and a mild diaper rash were noted. The rash resolved with the use of zinc oxide ointment. Stools were cultured but yielded no bacterial pathogen. No occult blood was found in the stools. At this time, human milk feedings comprised the total nutrition intake.

As the mother's milk was not available at all times, the infant was given Special Care 24 formula. Rash and diarrhea were not noted when the infant was receiving the formula. The infant progressed satisfactorily and was dismissed at 84 days of age. At that time he was receiving human milk feedings only and weighed 1,910 g.

One week after dismissal, the infant developed frequent greenish loose stools and a rash in the diaper and the umbilical areas. He also became very irritable and was hard to console. There was no occult blood in the stools and the culture was negative. The rash did not respond to local antibiotic and steroid therapy.

Because rash, diarrhea, and irritability worsened, he was rehospitalized six weeks after dismissal. He weighed 2,800 g, was pale and irritable, and had very sparse hair and eyelashes. A rash was present around the eyes, mouth, nose, and umbilicus and in the diaper area. The affected areas were beefy red with many superimposed papules. The infant's serum zinc level and maternal serum and milk zinc levels were obtained from a commercial laboratory by atomic absorption methods. The normal zinc values for serum and human milk in that laboratory ranged between 75 and 160 mcg/dL. All maternal and infant zinc levels were below normal, which confirmed the diagnosis of acquired zinc deficiency.

Prior to the availability of zinc values, the lesions improved following treatment with zinc oxide cream four times daily. Oral supplementation with zinc sulfate (15 mg twice daily) was then started and resulted in a dramatic improvement in the overall clinical condition. The maternal diet was subsequently supplemented with zinc sulfate which produced an increase in milk and serum zinc levels (Fig 1). Thereafter, zinc supplementation of the infant was stopped and the milk feedings were resumed. No signs of zinc deficiency have recurred.

1. Maternal and infant zinc levels before and after zinc supplementation.

Zinc Levels	Maternal (mcg/dl) Serum	Maternal (mcg/dl) Milk	Infant Serum (mcg/dl)
Before supplement	58.00	30.00	35.00
After supplement	98.00	99.00	78.00

Comment

Infants described in previous reports who developed acquired zinc deficiency while on human milk were very low birth weight infants (6–9). Their

Mubariz Naqvi, MD, Assistant Professor; Anita L. Carroll, RNC, MSN, Neonatal Clinical Nurse Specialist; William McCue, MD, Clinical Assistant Professor, and Rolf Habersang, MD, Associate Chairman, Department of Pediatrics, Texas Tech University Health Sciences Center, Amarillo. Send reprint requests to Dr Naqvi, Department of Pediatrics, Texas Tech University Health Sciences Center, 1400 Wallace Blvd, Amarillo, TX 79106.

maternal serum zinc levels were in normal range, but the milk zinc levels were low. Oral zinc supplementation of the mother did not increase zinc penetration into the milk (6,9). The infant reported here became deficient because maternal serum and milk were both low in zinc. The cause of maternal zinc deficiency in this case remains unknown. Zinc supplementation of the mother corrected the deficiency. Because the milk zinc concentration increased, it may have corrected the zinc deficiency in her offspring.

In addition to the many other problems of very low birth weight infants, zinc deficiency must be considered if there is poor weight gain, diarrhea, dermatitis, and irritability. Study of this patient indicates that zinc deficiency in breast-fed very low birth weight infants may result from low zinc levels in maternal milk.

REFERENCES

1. Nassi L, Poggini G, Vecchi C, et al: The zinc, copper and iron content of human colostrum and milk. Minerva Pediatr 26(16):832–836, 1974.

2. Vuori E, Kuitunen P: The concentrations of copper and zinc in human milk. A longitudinal study. Acta Pediatr Scand 68(1):33–37, 1979.

3. Kumar SP, Anday EK: Edema, hypoproteinemia, and zinc deficiency in low-birth-weight infants. Pediatrics 73(3):327–329, 1984.

4. Moynahan EJ: Acrodermatitis enteropathica: a lethal inherited human zinc-deficiency disorder, letter. Lancet 2(877):399–400, 1974.

5. Parker PH, Helinek GL, Meneely RL, et al: Zinc deficiency in a premature infant fed exclusively human milk. Am J Dis Child 136(1):77–78, 1982.

6. Aggett PJ, Atherton DJ, More J, et al: Symptomatic zinc deficiency in a breast-fed preterm infant. Arch Dis Child 55(7):547–550, 1980.

7. Connors TJ, Czarnecki DB, Haskett MI: Acquired zinc deficiency in a breast-fed premature infant. Arch Dermatol 119(4):319–321, 1983.

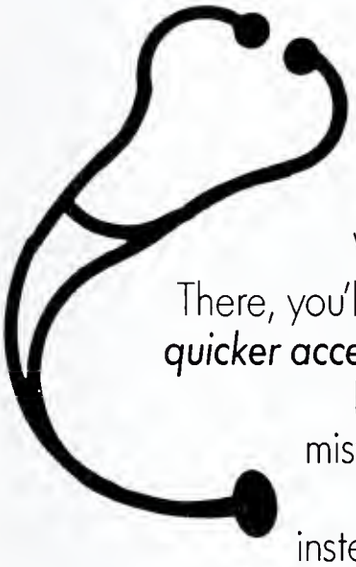
8. Sivasubramanian KN, Henkin RI: Behavioral and dermatologic changes and low serum zinc and copper concentrations in two premature infants after parenteral alimentation. J Pediatr 93(5):847–851, 1978.

9. Weymouth RD, Kelly R, Lansdell BJ: Symptomatic zinc deficiency in a premature infant. Aust Paediatr J 18(3):208–210, 1982.

Are you sponsoring a CME program for physicians?
Ask about a free information packet! Call or write TMA's Department of Medical Education, 1801 N. Lamar Blvd., Austin, TX 78706
Phone (512) 477-6704, ext. 253.

To be a successful doctor, you must be a successful businessperson, too.

That's where NYNEX can help.



Yesterday, being a successful doctor meant one thing: being good at medicine. Today, it takes financial savvy, a sharp eye for detail and a whole list of management skills to remain profitable.

Unfortunately, they don't always teach these things in medical school.

Which is why you should visit your local NYNEX Business Center. There, you'll find computer solutions for ***faster claims processing, fee recovery*** and ***quicker access to thousands of patient records at the touch of a button...***

Real solutions to help you save time and money...eliminate costly billing mistakes...and make your day-to-day operations run more smoothly.

This way, you'll be able to spend more time treating your patients—instead of your practice.

What's more, behind every NYNEX solution, you'll find:

• Medical specialists dedicated to serving your profession. • Complete accounting software for the medical environment. • Involvement that begins with evaluation of your objectives and takes you through automation of your office systems. • Attractive financing and leasing arrangements. • A commitment to superior customer service and support.

So visit your NYNEX Business Center today. Talk with a medical practice specialist. And find out about solutions that can help better manage—and grow—your practice.

For more information about NYNEX Business Centers, call toll free:
1-800-346-9999 Ext. 63

IBM Authorized Dealer Advanced Products

NYNEX Business Centers

THE INFORMATION CHAIN™

HOUSTON, TX
5370 Westheimer Road
713-877-1414

SAN ANTONIO, TX
300 Convent Street
Suite 180
512-226-8414

DALLAS, TX
5470 LBJ Freeway
Suite 100
214-392-3434

AUSTIN, TX
620 Congress Avenue
512-474-9009

FORT WORTH, TX
800 Cherry Street
817-877-1553

Please contact your Medical Specialist for additional information.

NYNEX is a mark of NYNEX Corporation. © 1987 NYNEX Business Information Systems Co.

GUSTAVO C. ROMÁN, MD
PAUL M. MUNDEN, MD
DAVID WAAGNER, MD
EDGAR O. LEDBETTER, MD

Reye's syndrome and juvenile rheumatoid arthritis: a case report in Texas

Gustavo C. Román, MD, Associate Professor of Neurology and Interim Chairman, Department of Neurology; Paul M. Munden, MD, Intern; David Waagner, MD, Assistant Instructor, Department of Pediatrics; and Edgar O. Ledbetter, MD, Professor, Department of Pediatrics, Texas Tech University Health Sciences Center, Lubbock, TX 79430. Send reprint requests to Dr Román.

Children with systemic inflammatory disorders are often placed on long-term, high-dose salicylate therapy. Reye's syndrome has been described as a complication of this therapy. We report clinical and laboratory findings in a young boy who developed Reye's syndrome while on aspirin therapy for the treatment of juvenile rheumatoid arthritis.

Epidemiological studies have demonstrated a strong association between salicylate administration during a viral illness and subsequent development of Reye's syndrome (RS) in young children and teenagers (1–3). Subsequently, the American Academy of Pediatrics has suggested that physicians withhold salicylate therapy during outbreaks of varicella or influenza (4). Children receiving long-term salicylate therapy for juvenile rheumatoid arthritis (JRA) would seem to be a group at special risk for the development of RS (5). Remington et al (6) found in Michigan a significant increase in the morbidity ratio for RS in children with JRA receiving long-term aspirin therapy. Rennebohm et al (7) in a prospective study of 176 patients with biopsy-confirmed RS in Cincinnati, Ohio, found six children with connective tissue disease who were receiving salicylates at the time of development of RS. These authors also confirmed that this last group of patients appear to be at increased risk for the development of RS when compared with the general population. We describe a patient with JRA who was receiving high-dose aspirin therapy and who developed Stage III RS (8) following an upper respiratory tract infection.

Case report

Four months before admission on March 2, a 4-year-old white boy developed pain, erythema, and swelling of the right knee. He was admitted to a local hospital where arthroscopic examination and synovial biopsy of the right knee joint was performed. Antinuclear antibody and rheumatoid factor studies were negative. A diagnosis of JRA was made and therapy with aspirin, 50 mg/kg/day, was begun. He subsequently developed a bilateral knee effusion and an episode of probable iritis. Aspirin dosage was increased to 85 mg/kg/day two months prior to admission on March 2. He tolerated well this increase in dosage, and his symptoms abated.

On March 2, 1986, the patient was admitted to Lubbock General Hospital (LGH) with altered mental status, periods of lethargy alternating with combativeness, and persistent vomiting. Four days before admission he had been seen at a local emergency room with complaints of otalgia and an upper respiratory tract infection. He was treated with an oral combination of trimethoprim and sulfamethoxazole (Septra) and released. Two days before the March 2 admission, his parents noted increasing lethargy and somnolence, and the patient complained of a sore throat. He was given pseudoephedrine for congestion. On the day of admission the parents became concerned about increasing lethargy, muscle weakness and decreased muscle tone, and three to four episodes of vomiting. He was seen again in the same local emergency room where laboratory studies showed an increased SGOT (327 IU/L) and a salicylate level of 36 mg/dL (2.61 mmol/L). He was transferred to the Lubbock General Hospital pediatrics service.

At the time of admission the patient was disoriented but responsive and alternated between periods of lethargy and combativeness. He was tachypneic and tachycardic. Physical examination revealed no hepatosplenomegaly or jaundice. Initial laboratory findings showed: serum ammonia, 60 μmol/L (normal range 11–35); SGOT, 3,177 IU/L (normal range 25–49 IU/L); SGPT, 2,517 IU/L (normal range 3–36 IU/L); and serum salicylate, 31 mg/dL (2.24 mmol/L). Urine drug screening for barbiturates, opiates, and benzodiazepines was negative. Cerebrospinal fluid studies and bacterial cultures were negative; viral cultures were not done. On admission a nonenhanced CT scan of the head was normal. EEG was abnormal with diffuse delta and theta slowing. Serum ammonia levels peaked at 164 μmol/L the following day. The neurological condition deteriorated to Grade III, and the patient became deeply comatose and was intubated. Liver biopsy was not performed since prothrombin time was prolonged and fibrin split products were elevated; there were marked ecchymoses and bleeding at venipuncture sites. The patient was treated with intravenous glucose, dexamethasone, mannitol, hyperventilation, and vitamin K. A central venous pressure (CVP) line and intracranial pressure (ICP) monitor were placed; with treatment the ICP remained below 7 mm Hg. Serum ammonia and liver function values returned to normal within five days. The child became more alert and was extubated. Follow-up EEG and neurological examination revealed no abnormalities. The patient two months later showed no neurological sequelae and was discharged on oral tolmetin sodium (Tolectin) 30 mg/kg/day for treatment of his JRA. The patient has since done well.

Comment

To our knowledge this is the first reported case in Texas of Reye's syndrome associated with high-dose salicylate therapy for JRA. The diagnosis was made on the basis of the history of a prodromal viral illness; acute onset of vomiting; a noninflammatory encephalopathy with normal CSF; abnormal values for SGOT, SGPT, serum ammonia, and prothrombin

time; absence of icterus; and a typical clinical course.

Hepatotoxic poisoning with acetaminophen, phenothiazines, CNS stimulants, heavy metals, and especially salicylates can masquerade as Reye's syndrome. Hepatotoxic encephalopathy secondary to salicylate intoxication with pathologic and clinical characteristics similar to RS has been described in children receiving aspirin in doses above 100 mg/kg/day as therapy for JRA (9). However, the hepatic dysfunction and encephalopathy in salicylate intoxication is dose-related. Appearing with increase in the doses, it resolves rapidly with discontinuance of aspirin therapy, and may reappear with resumption of high-dose salicylates. Further, liver biopsy fails to show the microvesicular lipid accumulation characteristic of Reye's syndrome (5,9). However, Starko and Mullick (10) have suggested that the hepatic changes observed in salicylate hepatotoxicity are the same as those of Reye's syndrome, including microvesicular steatosis, making the distinction between the two entities quite difficult. Although salicylate intoxication cannot be absolutely excluded in this patient, he tolerated aspirin therapy well for two months, and no recent increase in the dosage had been made prior to admission. The precipitous increase and extreme values of SGOT, high serum ammonia levels, and clinical course are most consistent with the diagnosis of Reye's syndrome.

Because children with JRA or other connective tissue diseases are more likely to be exposed to high salicylate levels over long periods of time, it is probable that they are at an increased risk of developing Reye's syndrome. Parent/patient education about the possible relationship between salicylate therapy and RS and the avoidance of salicylate ingestion during viral illnesses probably would reduce the risk. Sequential measurement of serum transaminase or ammonia levels has been suggested as a laboratory adjunct for children receiving long-term aspirin therapy. Such monitoring does not seem practical, however, in view of the extremely short time interval between the elevation of the transaminase or ammonia levels and the onset of clinical symptoms. It would be unreasonable to expect to be able to stop salicylate therapy at a time appropriate for the prevention of the development of RS. Alternative treatment options include therapy with nonsteroidal anti-inflammatory agents. Tolmetin sodium in particular has been shown to produce a lower incidence of serum transaminase elevation as compared to aspirin in children receiving long-term therapy (11), but the potential benefit of this treatment in the prevention of RS remains to be demonstrated.

REFERENCES

1. Waldman RJ, Hall WN, McGee H, et al: Aspirin as a risk factor in Reye's syndrome. JAMA 247(22):3089–3094, 1982.
2. Starko KM, Ray CG, Dominguez LB, et al: Reye's syndrome and salicylate use. Pediatrics 66(6):859–864, 1980.
3. Halpin TJ, Holtzhauer FJ, Campbell RJ, et al: Reye's syndrome and medication use. JAMA 248(6):687–691, 1982.
4. Aspirin and Reye syndrome. Committee on Infectious Diseases. Pediatrics 69(6):810–812, 1982.
5. Young RS, Torretti D, Williams RH, et al: Reye's syndrome associated with long-term aspirin therapy. JAMA 251(6):754–756, 1984.
6. Remington PL, Shabino CL, McGee H, et al: Reye syndrome and juvenile rheumatoid arthritis in Michigan. Am J Dis Child 139(9):870–872, 1985.
7. Rennebohm RM, Heubi JE, Daugherty CC, et al: Reye syndrome in children receiving salicylate therapy for connective tissue disease. J Pediatr 107(6):877–880, 1985.
8. Sarnaik AP: Diagnosis and management of Reye's syndrome. Compr Ther 8(10):47–53, 1982.
9. Ulshen MH, Grand RJ, Crain JD, et al: Hepatoxicity with encephalopathy associated with aspirin therapy in rheumatoid arthritis. J Pediatr 93(6):1034–1037, 1978.
10. Starko KM, Mullick FG: Hepatic and cerebral pathology findings in children with fatal salicylate intoxication: further evidence for a causal relation between salicylate and Reye's syndrome. Lancet 1(8320):326–329, 1983.
11. Levinson JE, Baum J, Brewer E Jr, et al: Comparison of tolmetin sodium and aspirin in the treatment of juvenile rheumatoid arthritis. J Pediatr 91(5):799–804, 1977.

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Diphtheria-tetanus-pertussis immunization and sudden infant death syndrome. Alexander M. Walker, MD, DrPH; Hershel Jick, MD; David R. Perera, MD, MPH; et al. American Public Health Association, *American Journal of Public Health,* vol 77, no 8, August 1987, pp 945–951.

The authors compared the recency of diphtheria-tetanus-pertussis (DTP) immunization in healthy children with birthweights greater than 2,500 gm who died of sudden infant death syndrome (SIDS) to that of age-matched reference children, using a modified case-control analysis. Focusing on very narrow time intervals following immunization, the authors found the SIDS mortality rate in the period zero to three days following DTP to be 7.3 times that in the period beginning 30 days after immunization (95% confidence interval, 1.7 to 31). The mortality rate of non-immunized infants was 6.5 times that of immunized infants of the same age (95% confidence interval, 2.2 to 19). The latter result and to some extent the former appear to be ascribable to known risk factors for SIDS. Although the mortality ratios for SIDS following DTP, as estimated from this study, are high, the period of apparently elevated risk was very short, so that only a small proportion of SIDs cases in infants with birthweights greater than 2,500 gm could be associated with DTP.

Sugar and sugar substitutes. Comparisons and indications. Roslyn B. Alfin-Slater, PhD, and F. Xavier Pi-Sunyer, MD. McGraw-Hill, *Postgraduate Medicine,* vol 82, no 2, August 1987, pp 46–50, 53–54, 56.

Americans consume large amounts of sugar and sugar substitutes to satisfy their sweet tooth. Over the years, the public has been confused about the safety of these substances. As a result, many patients turn to primary care physicians for answers about sweeteners. This article provides information about the currently available sweeteners—sugar, saccharin, and aspartame—and guidelines for their use by various patient populations.

Motor vehicle trauma and safety belt use in the context of public health priorities. David A. Sleet, PhD. American Association for the Surgery of Trauma, *The Journal of Trauma,* vol 27, no 7, 1987, pp 695–702.

Public health priorities arise from the convergence of a disease threat, public awareness of the threat, demand for proper protection from the threat, and a body of scientific literature to support the effectiveness of prevention/protection measures. With the success in combating infectious and some chronic diseases, public health is beginning to turn next to the challenge of a "new" pandemic, injury, especially to the prevention of motor vehicle trauma. Programs that promote the use of safety belts, child restraints, and automatic protection in the context of public health priorities offer the greatest hope for reducing the magnitude of the motor vehicle trauma problem.

Heart transplant candidates rejected on psychiatric indications. Robert L. Frierson, MD, and Steven B. Lippmann, MD. Cliggott Publishing Company, *Psychosomatics,* vol 28, no 7, July 1987, pp 347–352, 355.

Heart transplantation necessarily involves allocation of a scarce resource. Seventy candidates for the operation were evaluated by a psychiatrist providing consultation for a transplantation team. Thirteen patients were determined to be unsuitable for the surgery owing to psychiatric factors. The psychiatric recommendation to the team for selection or nonselection was based on evaluation of the patient's ability to overcome such challenges of transplantation as waiting for a donor, psychological incorporation of the new organ, and, especially, compliance with the medical regimen. Certain DSM-III diagnoses proved to be major impediments to patient selection. Based on their experience, the authors present specific recommendations for assessing candidates.

Change of address?
Please send the mailing label from your journal, together with your new address, to:
Membership Department
Texas Medical Association
1801 North Lamar Blvd.
Austin, TX 78701
(Yes, even if you're not a TMA member . . .)

Mean,

Powerful against susceptible pathogens.*

lean &

Easy on tight budgets.

clean.

Gentle to patients (generally well tolerated).

The one antimicrobial that belongs on every formulary.

Once-a-day Rocephin® ROCHE IV·IM ceftriaxone sodium/Roche

49

* ROCEPHIN is indicated in the following infections: bacterial septicemia, bone and joint, intra-abdominal, lower respiratory tract, skin and skin structure, urinary tract, bacterial meningitis and gonorrhea. Please see summary of product information on adjacent page for indicated susceptible organisms.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved

Please see adjacent page for summary of product information.

Rocephin® IV·IM

ceftriaxone sodium/Roche

Before prescribing, please consult complete product information, a summary of which follows:

MICROBIOLOGY The bactericidal activity of ceftriaxone results from inhibition of cell wall synthesis. Ceftriaxone has a high degree of stability in the presence of beta-lactamases, both penicillinases and cephalosporinases, of gram-negative and gram-positive bacteria. Ceftriaxone is usually active against the following microorganisms *in vitro* and in clinical infections (see Indications and Usage):

GRAM-NEGATIVE AEROBES: *Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae* (including ampicillin-resistant strains), *H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *Neisseria gonorrhoeae* (including penicillinase and nonpenicillinase producing strains), *Neisseria meningitidis, Proteus mirabilis, Proteus vulgaris, Morganella morganii* and *Serratia marcescens*.

Note: Many strains of the above organisms that are multiply resistant to other antibiotics, e.g., penicillins, cephalosporins and aminoglycosides, are susceptible to ceftriaxone sodium.

Ceftriaxone is also active against many strains of *Pseudomonas aeruginosa*.

GRAM POSITIVE AEROBES: *Staphylococcus aureus* (including penicillinase-producing strains) and *Staphylococcus epidermidis* (Note: methicillin resistant staphylococci are resistant to cephalosporins, including ceftriaxone), *Streptococcus pyogenes* (Group A beta-hemolytic streptococci), *Streptococcus agalactiae* (Group B streptococci) and *Streptococcus pneumoniae* (Note: Most strains of enterococci, *Streptococcus faecalis* and Group D streptococci are resistant.)

Ceftriaxone also demonstrates *in vitro* activity against the following microorganisms, although the clinical significance is unknown:

GRAM-NEGATIVE AEROBES: *Citrobacter freundii, Citrobacter diversus, Providencia* species (including *Providencia rettgeri*), *Salmonella* species (including *S typhi*), *Shigella* species and *Acinetobacter calcoaceticus*.

ANAEROBES: *Bacteroides* species, *Clostridium* species (Note: most strains of *C difficile* are resistant).

SUSCEPTIBILITY TESTING: Standard susceptibility disk method: Quantitative methods that require measurement of zone diameters give the most precise estimate of antibiotic susceptibility. One such procedure (Bauer AW, Kirby WMM, Sherris JC, Turck M: Antibiotic Susceptibility Testing by a Standardized Single Disk Method, *Am J Clin Pathol* 45: 493-496, 1966; Standardized Disk Susceptibility Test, *Federal Register* 39: 19182-19184, 1974, National Committee for Clinical Laboratory Standards, Approved Standard: ASM 2, Performance Standards for Antimicrobial Disk Susceptibility Tests, July 1975) has been recommended for use with disks to test susceptibility to ceftriaxone.

Laboratory results of the standardized single-disk susceptibility test using a 30 mcg ceftriaxone disk should be interpreted according to the following three criteria:

1. Susceptible organisms produce zones of 18 mm or greater, indicating that the tested organism is likely to respond to therapy.
2. Organisms that produce zones of 14 to 17 mm are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained.
3. Resistant organisms produce zones of 13 mm or less, indicating that other therapy should be selected.

Organisms should be tested with the ceftriaxone disk since ceftriaxone has been shown by *in vitro* tests to be active against certain strains found resistant to cephalosporin class disks.

Organisms having zones of less than 18 mm around the cephalothin disk are not necessarily of intermediate susceptibility or resistant to ceftriaxone.

Standardized procedures require use of control organisms. The 30-mcg ceftriaxone disk should give zone diameters between 29 and 35 mm, 22 and 28 mm and 17 and 23 mm for the reference strains *E coli* ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853, respectively.

DILUTION TECHNIQUES: Based on the pharmacokinetic profile of ceftriaxone, a bacterial isolate may be considered susceptible if the MIC value for ceftriaxone is not more than 16 mcg/ml. Organisms are considered resistant to ceftriaxone if the MIC is equal to or greater than 64 mcg/ml. Organisms having an MIC value of less than 64 mcg/ml, but greater than 16 mcg/ml, are expected to be susceptible if a high dosage (not to exceed 4 gm per day) is used or if the infection is confined to tissues and fluids (e.g., urine), in which high antibiotic levels are attained.

E coli ATCC 25922, *S aureus* ATCC 25923 and *P aeruginosa* ATCC 27853 are also the recommended reference strains for controlling ceftriaxone dilution tests. Greater than 95% of MICs for the *E coli* strain should fall within the range of 0.016 to 0.5 mcg/ml. The range for the *S aureus* strain should be 1 to 2 mcg/ml, while for the *P aeruginosa* strain the range should be 8 to 64 mcg/ml.

INDICATIONS AND USAGE: Rocephin is indicated for the treatment of the following infections when caused by susceptible organisms:

LOWER RESPIRATORY TRACT INFECTIONS caused by *Strep. pneumoniae, Streptococcus* species (excluding enterococci), *Staph aureus, H influenzae, H parainfluenzae, Klebsiella* species (including *K pneumoniae*), *E coli, E aerogenes, Proteus mirabilis* and *Serratia marcescens*.

SKIN AND SKIN STRUCTURE INFECTIONS caused by *Staph aureus, Staph epidermidis, Streptococcus* species (excluding enterococci), *E cloacae, Klebsiella* species (including *K pneumoniae*), *Proteus mirabilis* and *Pseudomonas aeruginosa*.

URINARY TRACT INFECTIONS (complicated and uncomplicated) caused by *E coli, Proteus mirabilis, Proteus vulgaris, M morganii* and *Klebsiella* species (including *K pneumoniae*).

UNCOMPLICATED GONORRHEA (cervical/urethral and rectal) caused by *Neisseria gonorrhoeae*, including both penicillinase and nonpenicillinase producing strains.

PELVIC INFLAMMATORY DISEASE caused by *N gonorrhoeae*.

BACTERIAL SEPTICEMIA caused by *Staph aureus, Strep pneumoniae, E coli, H influenzae* and *K pneumoniae*.

BONE AND JOINT INFECTIONS caused by *Staph aureus, Strep pneumoniae, Streptococcus* species (excluding enterococci), *E coli, P mirabilis, K pneumoniae* and *Enterobacter* species.

INTRA-ABDOMINAL INFECTIONS caused by *E coli* and *K pneumoniae*.

MENINGITIS caused by *H influenzae, N meningitidis* and *Strep pneumoniae*. Ceftriaxone has also been used successfully in a limited number of cases of meningitis and shunt infections caused by *Staph epidermidis* and *E coli*.

PROPHYLAXIS: The administration of a single dose of ceftriaxone preoperatively may reduce the incidence of postoperative infections in patients undergoing coronary artery bypass surgery.

Although ceftriaxone has been shown to have been as effective as cefazolin in the prevention of infection following coronary artery bypass surgery, no placebo-controlled trials have been conducted to evaluate any cephalosporin antibiotic in the prevention of infection following coronary artery bypass surgery.

SUSCEPTIBILITY TESTING: Before instituting treatment with Rocephin, appropriate specimens should be obtained for isolation of the causative organism and for determination of its susceptibility to the drug. Therapy may be instituted prior to obtaining results of susceptibility testing.

CONTRAINDICATIONS: Rocephin is contraindicated in patients with known allergy to the cephalosporin class of antibiotics.

WARNINGS: BEFORE THERAPY WITH ROCEPHIN IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE TO DETERMINE WHETHER THE PATIENT HAS HAD PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS, PENICILLINS OR OTHER DRUGS. THIS PRODUCT SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. ANTIBIOTICS SHOULD BE ADMINISTERED WITH CAUTION TO ANY PATIENT WHO HAS DEMONSTRATED SOME FORM OF ALLERGY, PARTICULARLY TO DRUGS. SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE THE USE OF SUBCUTANEOUS EPINEPHRINE AND OTHER EMERGENCY MEASURES.

Pseudomembranous colitis has been reported with the use of cephalosporins (and other broad spectrum antibiotics); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with antibiotic use.

ROCEPHIN® (ceftriaxone sodium/Roche)

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis. Cholestyramine and colestipol resins have been shown to bind to the toxin *in vitro*.

Mild cases of colitis respond to drug discontinuance alone. Moderate to severe cases should be managed with fluid, electrolyte and protein supplementation as indicated.

When the colitis is not relieved by drug discontinuance or when it is severe, oral vancomycin is the treatment of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile*. Other causes of colitis should also be considered.

PRECAUTIONS: *GENERAL*: Although transient elevations of BUN and serum creatinine have been observed at the recommended dosages, the nephrotoxic potential of Rocephin is similar to that of other cephalosporins.

Ceftriaxone is excreted via both biliary and renal excretion (see Clinical Pharmacology). Therefore, patients with renal failure normally require no adjustment in dosage when usual doses of Rocephin are administered, but concentrations of drug in the serum should be monitored periodically. If evidence of accumulation exists, dosage should be decreased accordingly.

Dosage adjustments should not be necessary in patients with hepatic dysfunction; however, in patients with both hepatic dysfunction and significant renal disease, Rocephin dosage should not exceed 2 gm daily without close monitoring of serum concentrations.

Alterations in prothrombin times have occurred rarely in patients treated with Rocephin. Patients with impaired vitamin K synthesis or low vitamin K stores (e.g., chronic hepatic disease and malnutrition) may require monitoring of prothrombin time during Rocephin treatment. Vitamin K administration (10 mg weekly) may be necessary if the prothrombin time is prolonged before or during therapy.

Prolonged use of Rocephin may result in overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Rocephin should be prescribed with caution in individuals with a history of gastrointestinal disease, especially colitis.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Carcinogenesis: Considering the maximum duration of treatment and the class of the compound, carcinogenicity studies with ceftriaxone in animals have not been performed. The maximum duration of animal toxicity studies was six months.

Mutagenesis: Genetic toxicology tests included the Ames test, a micronucleus test and a test for chromosomal aberrations in human lymphocytes cultured *in vitro* with ceftriaxone. Ceftriaxone showed no potential for mutagenic activity in these studies.

Impairment of Fertility: Ceftriaxone produced no impairment of fertility when given intravenously to rats at daily doses up to 586 mg/kg/day, approximately 20 times the recommended clinical dose of 2 gm/day.

PREGNANCY: Teratogenic Effects: Pregnancy Category B: Reproductive studies have been performed in mice and rats at doses up to 20 times the usual human dose and have no evidence of embryotoxicity, fetotoxicity or teratogenicity. In primates, no embryotoxicity or teratogenicity was demonstrated at a dose approximately three times the human dose.

There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nonteratogenic Effects: In rats, in the Segment I (fertility and general reproduction) and Segment III (perinatal and postnatal) studies with intravenously administered ceftriaxone, no adverse effects were noted on various reproductive parameters during gestation and lactation, including postnatal growth, functional behavior and reproductive ability of the offspring, at doses of 586 mg/kg/day or less.

NURSING MOTHERS: Low concentrations of ceftriaxone are excreted in human milk. Caution should be exercised when Rocephin is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness of Rocephin in neonates, infants and children have been established for the dosages described in the Dosage and Administration section.

ADVERSE REACTIONS: Rocephin is generally well tolerated. In clinical trials, the following adverse reactions, which were considered to be related to Rocephin therapy or of uncertain etiology, were observed:

LOCAL REACTIONS—pain, induration or tenderness at the site of injection (1%). Less frequently reported (less than 1%) was phlebitis after I.V. administration.

HYPERSENSITIVITY—rash (1.7%). Less frequently reported (less than 1%) were pruritus, fever or chills.

HEMATOLOGIC—eosinophilia (6%), thrombocytosis (5.1%) and leukopenia (2.1%). Less frequently reported (less than 1%) were anemia, neutropenia, lymphopenia, thrombocytopenia and prolongation of the prothrombin time.

GASTROINTESTINAL—diarrhea (2.7%). Less frequently reported (less than 1%) were nausea or vomiting, and dysgeusia.

HEPATIC—elevations of SGOT (3.1%) or SGPT (3.3%). Less frequently reported (less than 1%) were elevations of alkaline phosphatase and bilirubin.

RENAL—elevations of the BUN (1.2%). Less frequently reported (less than 1%) were elevations of creatinine and the presence of casts in the urine.

CENTRAL NERVOUS SYSTEM—headache or dizziness were reported occasionally (less than 1%).

GENITOURINARY—moniliasis or vaginitis were reported occasionally (less than 1%).

MISCELLANEOUS—diaphoresis and flushing were reported occasionally (less than 1%).

Other rarely observed adverse reactions (less than 0.1%) include leukocytosis, lymphocytosis, monocytosis, basophilia, a decrease in the prothrombin time, jaundice, glycosuria, hematuria, bronchospasm, serum sickness, abdominal pain, colitis, flatulence, dyspepsia, palpitations and epistaxis.

DOSAGE AND ADMINISTRATION: Rocephin may be administered intravenously or intramuscularly. The usual adult daily dose is 1 to 2 gm given once a day (or in equally divided doses twice a day) depending on the type and severity of the infection. The total daily dose should not exceed 4 grams.

For the treatment of serious miscellaneous infections in children, other than meningitis, the recommended total daily dose is 50 to 75 mg/kg (not to exceed 2 grams), given in divided doses every 12 hours. Generally, Rocephin therapy should be continued for at least two days after the signs and symptoms of infection have disappeared. The usual duration is 4 to 14 days; in complicated infections longer therapy may be required.

In the treatment of meningitis, a daily dose of 100 mg/kg (not to exceed 4 grams), given in divided doses every 12 hours, should be administered with or without a loading dose of 75 mg/kg.

For the treatment of uncomplicated gonococcal infections, a single intramuscular dose of 250 mg is recommended.

For preoperative use (surgical prophylaxis), a single dose of 1 gm administered ½ to 2 hours before surgery is recommended.

When treating infections caused by *Streptococcus pyogenes*, therapy should be continued for at least ten days.

No dosage adjustment is necessary for patients with impairment of renal or hepatic function; however, blood levels should be monitored in patients with severe renal impairment (e.g., dialysis patients) and in patients with both renal and hepatic dysfunctions.

HOW SUPPLIED: Rocephin (ceftriaxone sodium/Roche) is supplied as a sterile crystalline powder in glass vials and piggyback bottles. The following packages are available:

Vials containing 250 mg equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1962-01)
Vials containing 500 mg equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1963-01)
Vials containing 1 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1964-01)
Piggyback bottles containing 1 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1964-03)
Vials containing 2 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1965-01)
Piggyback bottles containing 2 gm equivalent of ceftriaxone. Boxes of 10 (NDC 0004-1965-03)
Bulk pharmacy containers, containing 10 gm equivalent of ceftriaxone. Boxes of 1 (NDC 0004-1971-01)
NOT FOR DIRECT ADMINISTRATION

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

References:

1. Data on file, Hoffmann-La Roche Inc.
2. Patel IH, Kaplan SA: *Am J Med* 77:17-25, Oct 19, 1984
3. Richards DM, *et al*: *Drugs* 27:469-527, 1984
4. Cleeland R, Squires E: *Am J Med* 77:3-11, Oct 19, 1984
5. Tanner DJ, Nazarian MQ: *Am J Med* 77:104-111, Oct 19, 1984

Q&A: Senator Bentsen on catastrophic coverage

Earlier this year, Sen Lloyd Bentsen (D-Houston) introduced S 1127, the Medicare Catastrophic Loss Prevention Act of 1987. According to Senator Bentsen, who has long been concerned with the effects of catastrophic illness, the act "will provide catastrophic coverage for all elderly and disabled people, thereby ensuring a more secure financial future." At press time, Senate action on S 1127 was pending.

Senator Bentsen is serving his third six-year Senate term and is chairman of the Senate Finance Committee. He also serves on the Commerce, Science and Transportation Committee, the Senate Intelligence Committee, and the Joint Economic Committee. In this interview, he describes how S 1127 would benefit health care recipients.

TMA: Texas physicians have been concerned for years about the patient's potential loss of financial stability due to a catastrophic illness. What percentage of Medicare beneficiaries do not have catastrophic insurance coverage?

Senator Bentsen: Approximately 65% of Medicare beneficiaries have supplementary insurance policies. In addition, 10% to 12% of Medicare beneficiaries are eligible for Medicaid. The remaining 20% to 25% of those who participate in Medicare have no supplementary insurance. This group tends to be the oldest and the most frail—those least able to afford supplemental insurance, but most likely to require health care.

Although most Medicare participants have some form of private supplemental insurance, policies vary greatly in their scope of coverage. Many elderly people who purchase supplemental insurance still are vulnerable to high medical care costs. Often, they are unaware that these additional expenses may occur. If enacted into law, the Medicare Catastrophic Loss Prevention Act of 1987 (S 1127) will provide catastrophic coverage for all elderly and disabled people, thereby ensuring a more secure financial future.

TMA: In what manner will Medicare benefits be expanded for both Part A and Part B coverage? What new benefits will the act include?

Senator Bentsen: The purpose of this bill is to assist with some of the staggering costs associated with catastrophic illness by modifying the existing Medicare program in a number of ways. First, like the proposal developed by President Reagan's Secretary of Health and Human Services Otis Bowen, S 1127 would place an annual limit on out-of-pocket expenses for beneficiaries. Currently, annual out-of-pocket expenses for the 7 million beneficiaries who require hospitalization can amount to thousands of dollars. Under this legislation, the maximum spent by a beneficiary each year on Medicare-covered services would be $1,700. This limit would reduce drastically the amount of out-of-pocket liability for the elderly and disabled who incur large medical costs.

Additionally, beneficiaries who choose this coverage would have to pay the annual in-patient hospital deductible (currently $520) only once, as opposed to as many as six times under the current system. They also could receive daily home care for 45 days if they recently have been hospitalized or discharged from a skilled nursing facility. This is more than twice as many as the present number of home health days covered by Medicare. Regardless of whether they had been hospitalized first, all Medicare beneficiaries would be entitled to three weeks of daily home care.

TMA: How would your package be financed in light of budget retrenchment and other cost-cutting measures? How is the "progressive supplemental premium" different from a means test?

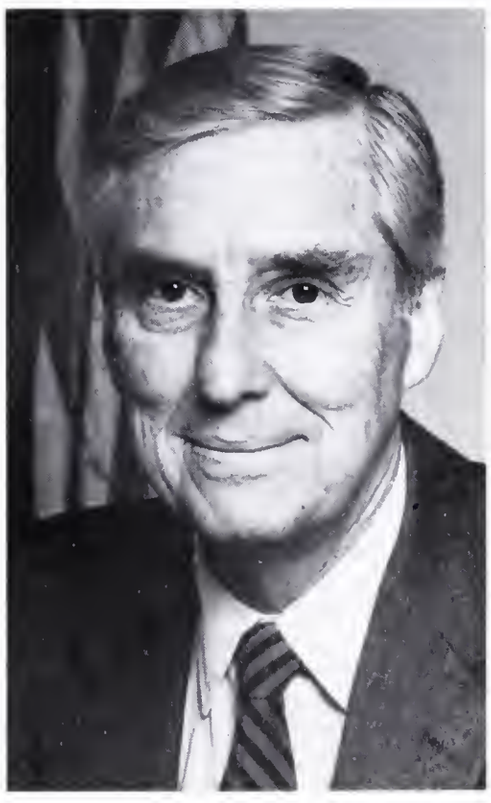
Senator Bentsen: Financially, this benefit package is revenue and budget neutral, having no impact on the national deficit. Because the current budget restraints preclude increasing general revenue expenditures, S 1127 includes a dual premium system through which program participants pay for the improved benefit package. This approach would involve an increase in the current Part B premium of $4 per month ($48 per year). In addition, there would be established a new "supplemental" Part B premium of $1.02 per month for each $150 of income tax due after the first $150.

As with the current Part B premium, the $4 increase in the monthly premium and the supplemental premium would be prorated based on the number of months during the year that the individual is enrolled in Part B. The $4 premium and the supplemental premium would be indexed to account for increases in the cost of the catastrophic benefits the bill provides.

Means testing involves providing benefits only if an individual or family meets carefully prescribed eligibility criteria that generally are tied to income. Under the provisions of S 1127, purchase of the full catastrophic package would be voluntary and available to all Medicare participants who elect to purchase Part B of the program. In other words, every beneficiary would be entitled to the full range of Medicare-covered services if he or she chose to participate in the program.

TMA: Recent surveys have shown that many Medicare beneficiaries are not fully aware of what services the program covers. Your bill presents a new approach to the program's benefits package.

Senator Lloyd Bentsen is sponsoring the Catastrophic Loss Prevention Act of 1987.



How would you educate patients and their physicians on the covered services outlined in S 1127?

Senator Bentsen: Our most important means of educating the elderly and disabled would be the new annual notice to beneficiaries informing them of services that are and are not covered under Medicare, which the Secretary of Health and Human Services is required to provide. Additionally, the notice would explain the differences between regular Medicare services and services covered under the new catastrophic provisions. Improved understanding of the extent of Medicare coverage also should assist elderly and disabled beneficiaries in making informed decisions about purchase of private supplemental insurance policies.

TMA: One of the most catastrophic events for an older American is placement in a nursing home. Care for one year in the average nursing home is estimated to cost around $22,000. The elderly or their families bear nearly 50% of nursing home costs. The Medicaid program, which never was designed to pay for the nursing home costs of middle-income elderly, finances the remaining 50%. Does your proposal provide incentives for Medicare beneficiaries to seek care in less expensive settings, ie, home health and hospices?

Senator Bentsen: Family members or friends provide a great deal of care for patients suffering from extended illnesses. This situation can place a tremendous financial burden on families, especially in instances where one family member must leave the work force in order to provide care. In an effort to alleviate some of these costs, S 1127 includes a provision that increases the number of days for which Medicare will reimburse the cost of home health care. This increase (from 21 to 45 covered days) will help address the post-acute health care needs of beneficiaries recently discharged from hospitals or skilled nursing facilities.

The bill repeals the 210-day limit for the terminally ill who elect hospice care. This change is designed to assure that the patient's care is reimbursable until the time of death. In an effort to explore alternative means of encouraging the development of private insurance to cover long term care, S 1127 instructs the Secretary of the Treasury to report to the Congress on the feasibility of using tax incentives to spur the creation of long term health care insurance.

TMA: Over the past several years, Congress has instituted a number of programs aimed at curbing expenditures under the Medicare program. Many of these changes have had adverse effects on physicians treating Medicare beneficiaries. How would S 1127 impact on physicians and their practices?

Senator Bentsen: With the added protection of an annual limit on out-of-pocket expenditures, the elderly or disabled of modest income should be less reticent to promptly seek a physician's care when it is needed. Accordingly, physicians would be able to diagnose and treat earlier.

TMA: A significant portion of the elderly's health care dollar goes to prescription drugs. How does S 1127 address the issue of payment for prescription drugs?

Senator Bentsen: S 1127 directs the Secretary of Health and Human Services to request an Institute of Medicine to study prescription drugs and make recommendations regarding coverage of pharmaceutical costs under the Medicare program. The bill expands coverage of immunosuppressive drugs for organ transplant patients by allowing the costs associated with the production of these agents to count toward the $1,700 annual limit on out-of-pocket expenses.

TMA: In Texas, the state Medicaid program buys into Medicare, paying Medicare cost-sharing amounts for beneficiaries eligible for both programs. What impact would S 1127 have on a state with such a policy?

Senator Bentsen: Under the provisions of this bill, some of the Medicaid costs states now incur would be shifted to the new Medicare catastrophic program. Nationwide, about $360 million in Medicaid savings would be generated in fiscal year 1988, approximately 45% of which would accrue to the states. S 1127 would require each state to use its portion of this savings to improve health coverage of the lowest income elderly under the state's Medicaid program or to support programs designed to protect noninstitutionalized persons from becoming impoverished when a spouse enters a nursing home. Because of Texas' Medicaid policy of buying into Medicare, the state would receive a "windfall," which it then could apply toward the cost of providing care for elderly and disabled persons of limited income.

Yours each month in TEXAS MEDICINE:
- *Peer-reviewed clinical articles*
- *What TMA is doing for you*
- *Public health news you can use*
- *What's happening in Austin and Washington*
- *Medicine and the Law*
- *Continuing Education Directory*

American Physicians Insurance Exchange

MALPRACTICE

It's an allegation that can happen to anyone.

You don't have to stand alone!

We wrote the book on malpractice insurance. We started writing professional liability insurance over 12 years ago, when the other insurance companies were looking for a way out.

Why? Because we're 100% owned and controlled by dentists and physicians. We know you can't operate your practice without malpractice insurance.

We know a good insurance company must insure *all* specialties. And we have never settled a claim without an insured's written consent. We believe that you shouldn't have to stand alone. If you're concerned about your insurance company's commitment to you, give us a call today.

1301 Capital of Texas Highway, Suite #B-300
Austin, Texas 78746
(512) 328-1520

Nationwide 1-800-252-3628

In San Antonio:
Bill Sweet
(512) 497-3205

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

Medicine and the Law articles are intended to help physicians understand the law by providing legal information on selected topics. This article is published with the understanding that TMA is not engaged in providing legal advice. When dealing with specific legal matters readers should seek assistance from their own attorneys.

Legislature adds new life to organ donation, transplantation

Advances in transplantation technologies have enabled physicians to enhance the quality of many patients' lives. However, the successes won through technology have made evident a need for increasing the supply of organs and tissues. The Texas Legislature recently passed legislation amending the Texas Anatomical Gift Act (1), effective Jan 1, 1988. This legislation requires hospitals to adopt policies and protocols for requesting, at the time of death, the next of kin's consent to give all or any part of a decedent's body for donation for transplantation or research (2). Recent amendments to the Social Security Act, which take effect Oct 1, 1987, also address the requirement for hospital protocols for organ procurement (3). These protocols are called "required requests." This article explores the role of the physician and the hospital in light of the new legislation that mandates "required requests." A review of the legal framework for organ donation sets the stage.

Legal framework for organ donation

The 50 states and the District of Columbia have adopted the Uniform Anatomical Gift Act. The 61st Legislature enacted this statute in Texas in 1969. The legislature has amended the statute a number of times. Most recently, the 70th Legislature added the requirement that hospitals establish a protocol for identifying potential organ and tissue donors and for informing persons of the option to donate (2). Other important aspects of the Texas Anatomical Gift Act are highlighted below:

Q. Who may make an anatomical gift?

A. Any person who has "testamentary capacity" (4) under the Texas Probate Code may give all or any part of his or her body for medical or dental education or research, the advancement of medical or dental sciences, therapy, or transplantation (5).

Q. When does a gift made under the act take effect?

A. Although the act is limited to gifts of organs from deceased persons, arrangements for the gift may be made either by the donor before death or by his or her survivors after death (4).

Q. Do special considerations apply if a patient is or may become "brain dead"?

A. A physician in Texas may declare a patient dead if, based on ordinary standards of medical practice, there is an irreversible cessation of spontaneous respiratory and circulatory functions (6). If the patient's respiration and circulation are being maintained artificially, he or she may be considered legally dead if a physician declares there is an irreversible cessation of all spontaneous brain function (7). Since death must be pronounced before artificial life support is withdrawn (8), the physician and the family may have a unique opportunity to arrange for anatomical donations. If death occurs suddenly, donated organs must be removed for transplantation or storage within hours to assure that they are usable.

Q. How does a person indicate that he or she wishes to make an organ donation?

A. Under the Anatomical Gift Act, a gift of all or part of the body may be made in a will (9). The gift becomes effective upon the death of the person making the will (the testator) without having to wait for probate to occur. If the will is not probated or if it later is declared invalid for testamentary purposes, the gift, to the extent that it has been acted upon in good faith, is nevertheless valid and effective.

A gift also may be made by a document other than a will (10). The document, which may be a card designed to be carried, must be signed by the donor in the presence of two witnesses who also must sign the document in his or her presence. There is no central registry or appropriate person with whom a potential donor needs to file the "document of gift." The document of gift only need be produced prior to a donation. In Texas, the back side of an automobile drivers license provides a convenient means for making gifts of bodies or parts of bodies using the document format just described (11).

Q. Can the patient's family make an anatomical gift upon the death of their relative?

A. Relatives of the deceased may make a gift at the time of death unless the deceased or other family member or guardian who has higher priority has given actual notice otherwise (12). The order of priority as provided in section 3b of the statute is: (a) the spouse, (b) an adult son or daughter, (c) either parent, (d) an adult brother or sister, (e) a guardian of the person of the decedent at the time of his death, and (f) any other person authorized or under obligation to dispose of the body.

Q. May the donee reject the gift?

A. Yes, the donee may reject the gift. However, if the donee accepts the gift of the entire body, the surviving spouse or any other person authorized to give all or any part of the decedent's body may authorize embalming and have the use of the body for funeral services, subject to the terms of the gift. If the gift is of a part of the body, the donee, upon the death of the donor and prior to embalming, shall cause the part to be removed without unnecessary mutilation. After removal of the part, custody of the remainder of the body vests in the surviving spouse, next of kin, or other persons under obligation to dispose of the body (13).

Q. Can the physician who attends the donor at his or her death also remove the organ to be transplanted?

A. No. A physician who attends the donor at his death, or, if none, the physician who certifies the death (14) shall deter-

mine the time of death. In either case, this physician may not participate in the procedures of removing or transplanting a part according to the statute (14).

Q. Can people be sued when they are involved in these activities?

A. A person who acts in good faith in accordance with the terms of this act is not liable for damages in any civil action or subject to prosecution in any criminal proceeding for his or her act, so long as the prerequisites for an anatomical gift have been met under the laws applicable at the time the gift was made (15).

Q. Who can be a donee under these provisions?

A. Section 4 of the Anatomical Gift Act lists the eligible donees of bodies or parts of bodies. They include hospitals, physicians, medical or dental schools and similar entities, and eye banks.

Q. What if the donor is mentally retarded and the relatives wish to have that person's body or organs available for donation to others?

A. Article 4590-2a of the Anatomical Gift Act permits the guardian of a mentally retarded ward of 12 years of age or older to petition the district court for an order authorizing the donation of one of his or her two kidneys to a father, mother, son, daughter, sister, or brother of the retarded ward. A hearing must be held with the retarded ward represented by an attorney and by a guardian not related to the ward. Good cause must be shown that a kidney donation is indicated with six conditions being met. An "in-chambers" interview with the mentally retarded ward out of the presence of the guardian also is required to determine whether the prospective donor agrees to the donation. The court also may order a comprehensive diagnosis and evaluation to help evaluate the prospective donor's capacity to agree to the donation.

Hospital protocols

The most recent amendment to the Texas Anatomical Gift Act mandates each hospital in Texas to develop a protocol for identifying potential organ and tissue donors for use when a death occurs in the hospital (16). Several important aspects of the amendments to the act are highlighted below:

Q. Who shall be asked to authorize an anatomical gift?

A. Except for certain limitations on requests set out in the act, the following persons in the order of priority by class may be approached to authorize a donation: (a) spouse, (b) an adult son or daughter, (c) either parent, (d) an adult brother or sister, (e) a guardian of the decedent at the time of his or her death, and (f) any other person authorized or under obligation to dispose of the body. If there are two or more people in the class authorized to make a gift, the inquiry shall be made to those class members reasonably available at or near the time of notification of death. The protocol also provides for appropriately trained individuals to make the inquiries and encourages sensitivity to families' beliefs and circumstances in all discussions regarding donation of organs and tissues (16).

Q. When is the inquiry not required?

A. No inquiry is required if: (1) the decedent is medically unsuitable for donation, (2) there is actual notice of objection by the decedent or by the person or persons authorized to make a donation, or (3) the hospital administrator has not been notified by a qualified organ or tissue procurement organization that there is a current medical need for organs or tissues and that the organization is available for retrieval (17).

Q. Who will establish the standards for determining whether a person is suitable to donate organs or tissues?

A. The standards shall be based on accepted medical standards for determining whether a person is medically suitable to donate organs or tissues (18).

Q. Are there special record-keeping requirements?

A. The protocol is to provide for documentation of the inquiry and its disposition in the decedent's medical records (19).

Q. What protections, if any, are provided by the new amendments to the act?

A. Any person who acts in good faith in accordance with the new amendment is not liable as a result of such activity, except in the case of the person's own negligence. "Good faith" in determining the appropriate family member or other person means making reasonable efforts to locate and contact the highest prioritized class member or members available at or near the time of death (20).

Q. What effect do the amendments to the Social Security Act have on organ donation?

A. The amendments address the requirement for hospital protocols for organ procurement and the procedures for organ procurement agencies to receive reimbursement under Titles XVIII and XIX (3). By following the Texas law, hospitals also should be in compliance with the federal law.

Q. Has the JCAH addressed the "required request" protocol?

A. The JCAH recently has adopted revisions to its standards for accreditation for hospitals (21). These changes, which become effective Jan 1, 1988, are listed below:

MA1.4: The Chief Executive Officer, through management and administrative staff, provides for the following:

MA1.4.13: Policies and procedures for the identification and referral of organ and tissue donors to organ procurement agencies or tissue banks.

MA1.4.14: Policies and procedures for notifying appropriate organ procurement agencies and tissue banks when organs and tissues become available for transplantation.

The medical record requirements of established protocols also are addressed under MR2.2.14-MR2.2.14.4.

Q. Are there any protocols available for reference to hospitals and physicians?

A. The Texas Hospital Association has drafted protocols for use by small and midsize to large hospitals. These protocols were drafted with the advice and assistance of William T. Hill, MD, chairman of the TMA Council on Scientific Affairs. Copies of the protocols are available from the Texas Hospital Association, PO Box 15587, Austin, TX 78761, phone (512) 453-7204, or the executive staff of the Council on Scientific Affairs, TMA, 1801 N Lamar Blvd, Austin, TX 78701, phone (512) 477-6704.

Donation procedures outside the hospital

Whether by happenstance or design, many deaths occur outside the hospital. In such instances, no established protocol exists. A physician may want to consider using the qualified organ or tissue procurement organization or organizations that would be used under the hospital protocol.

An alternate way to facilitate donation procedures is by using the Living Bank, a national nonprofit organization that helps those who wish to donate their organs or bodies for transplantation or medical study at their deaths. The Living Bank is operated 24 hours a day, seven days a week, and serves all 50 states. When the Living Bank is called (713/528-2971) at the time of a donor's death, regardless of whether that donor is a registered Living Bank member, the trained staff members contact appropriate organ banks, transplant teams, and medical schools in the area of the donor's death. The Living Bank will call the next of kin and counsel the donor's family when needed.

The Living Bank also calls retrieving technicians in the order in which organs must be removed. The bank offers a comprehensive notebook covering all aspects of anatomical donations.

Additionally, the United Network for Organ Sharing operates a toll free number (1-800-24-DONOR) for physicians, nurses, and other health care professionals who have questions regarding potential organ donation. The number is answered 24 hours a day.

Ethical considerations

The American Medical Association's Council on Ethical and Judicial Affairs has considered the subject of organ donation and organ transplantation and has issued two opinions:

> Organ Donation. The voluntary donation of organs in appropriate circumstances is to be encouraged. However, it is not ethical to participate in a procedure to enable a donor to receive payment, other than for the reimbursement of expenses necessarily incurred in connection with removal, for any of the donor's non-renewable organs (22).

> Organ Transplantation Guidelines. The following statement is offered for guidance of physicians as they seek to maintain the highest level of ethical conduct in the transplanting of human organs.
>
> (1) In all professional relationships between a physician and his patient, the physician's primary concern must be the health of his patient. He owes the patient his primary allegiance. This concern and allegiance must be preserved in all medical procedures, including those which involve the transplantation of an organ from one person to another where both donor and recipient are patients. Care must, therefore, be taken to protect the rights of both the donor and the recipient, and no physician may assume a responsibility in organ transplantation unless the rights of both donor and recipient are equally protected.
>
> (2) A prospective organ transplant offers no justification for a relaxation of the usual standard of medical care. The physician should provide his patient, who may be a prospective organ donor, with that care usually given others being treated for a similar injury or disease.
>
> (3) When a vital, single organ is to be transplanted, the death of the donor shall have been determined by at least one physician other than the recipient's physician. Death shall be determined by the clinical judgment of the physician. In making this determination, the ethical physician will use currently accepted and available scientific tests.
>
> (4) Full discussion of the proposed procedure with the donor and the recipient or their responsible relatives or representatives is mandatory. The physician should be objective in discussing the procedure, in disclosing known risks and possible hazards, and in advising of the alternative procedures available. The physician should not encourage expectations beyond those which the circumstances justify. The physician's interest in advancing scientific knowledge must always be secondary to his primary concern for the patient.
>
> (5) Transplant procedures of body organs should be undertaken (a) only by physicians who possess special medical knowledge and technical competence developed through special training, study, and laboratory experience and practice, and (b) in medical institutions with facilities adequate to protect the health and well-being of the parties to the procedure.
>
> (6) Transplantation of body organs should be undertaken only after careful evaluation of the availability and effectiveness of other possible therapy (23).

Challenge to physicians

Because physicians play a unique role in organ donation and transplantation, they can recommend productive ways to reach potential donors or family members of potential donors and assure that organ donations reach patients who need them. A growing number of Americans are alive and healthy today because of organ transplantation.

Become familiar with the hospital protocol, the Living Bank, and other organ donor programs so that transplantation of vital organs to those who need them can continue.

C. J. FRANCISCO, JD
TMA Attorney

REFERENCES

1. Tex Rev Civ Stat art 4590-2 (Vernon Supp 1987).
2. The Texas Anatomical Gift Act, ch 28, 1987 Tex Sess Law Serv 125 (Vernon).
3. Title 42 USCA sec 273 (West Supp 1987); Title 42 USCA sec 1320b-8 (West Supp 1987).
4. Tex Rev Civ Stat art 4590-2, sec 3 (Vernon Supp 1987).
5. Tex Rev Civ Stat art 4590-2, sec 4 (Vernon Supp 1987).
6. Tex Rev Civ Stat art 4447t, sec 1(a) (Vernon Supp 1987).
7. Tex Rev Civ Stat art 4447t, sec 1(b) (Vernon Supp 1987).
8. Tex Rev Civ Stat art 4447t, sec 1(c) (Vernon Supp 1987).
9. Tex Rev Civ Stat art 4590-2, sec 5(a) (Vernon Supp 1987).
10. Tex Rev Civ Stat art 4590-2, sec 5(b) (Vernon Supp 1987).
11. Tex Rev Civ Stat art 6687b, sec 11B (Vernon Supp 1987).
12. Tex Rev Civ Stat art 4590-2, sec 3(b) (Vernon Supp 1987).
13. Tex Rev Civ Stat art 4590-2, sec 8(a) (Vernon Supp 1987).
14. Tex Rev Civ Stat art 4590-2, sec 8(b) (Vernon Supp 1987).
15. Tex Rev Civ Stat art 4590-2, sec 8(c) (Vernon Supp 1987).
16. The Anatomical Gift Act, ch 28, sec 2, 1987 Tex Sess Law Serv 125 (to be codified as Tex Rev Civ Stat art 4590-2, sec 8A [a] [Vernon Supp 1988]).
17. The Anatomical Gift Act, ch 28, sec 2, 1987 Tex Sess Law Serv 126 (to be codified at Tex Rev Civ Stat art 4590-2, sec 8A [d] [Vernon Supp 1988]).
18. The Anatomical Gift Act, ch 28, sec 2, 1987 Tex Sess Law Serv 126 (to be codified at Tex Rev Civ Stat art 4590-2, sec 8A [b] [Vernon Supp 1988]).
19. The Anatomical Gift Act, ch 28, sec 2, 1987 Tex Sess Law Serv 126 (to be codified at Tex Rev Civ Stat art 4590-2, sec 8A [e] [Vernon Supp 1988]).
20. The Anatomical Gift Act, ch 28, sec 2, 1987 Tex Sess Law Serv 127 (to be codified at Tex Rev Civ Stat art 4590-2, sec 8A [h] [Vernon Supp 1987]).
21. Joint Commission standards revised. JCAH Perspectives 1987 (Jan–Feb): 11.
22. Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association, 1986, sec 2.14, p 10.
23. Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association, 1986, sec 2.15, p 11.

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology
Diabetes
Pediatrics
Ob/Gyn
Psychiatry
Gastroenterology

- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

MARCH 1987 / VOL. 9, NO. 3
Family Practice Recertification
Cl. 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Scheibel, MD
Cl. 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Attico, MD • Richard J. Smith, III • Michael A. Friedman
Cl. 1 Communicable diseases
Acquired Immunodeficiency Syndrome, Part 2: The Spectrum of Disease
Navin M. Amin, MD
Cl. 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD
EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION
page 8

Motrin® 800 mg TABLETS
ibuprofen

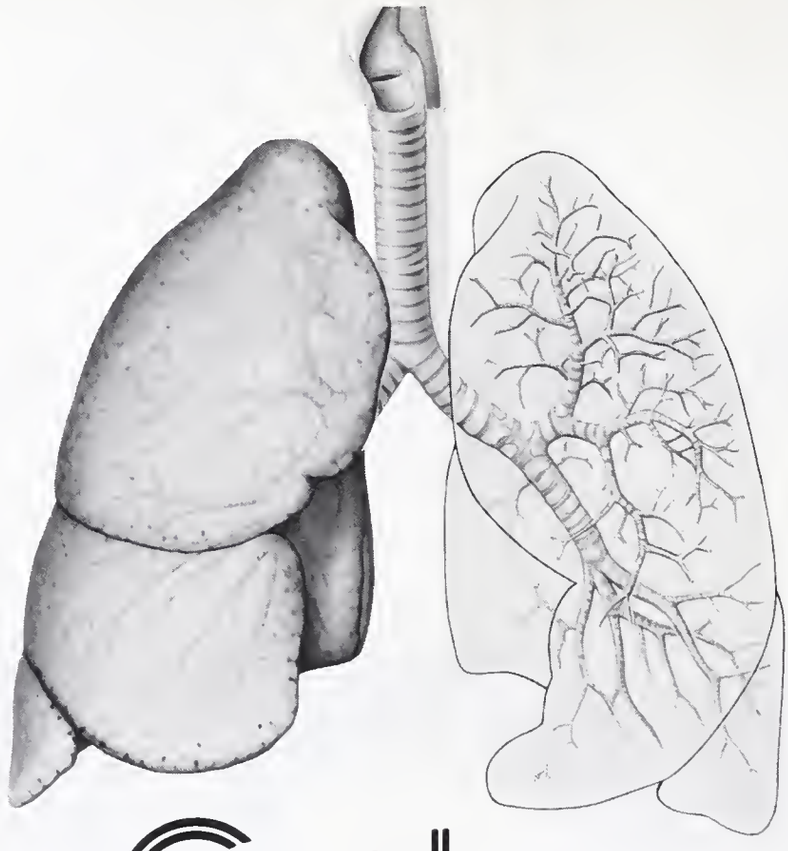
Extra strength
Convenience
Economy

Upjohn
A Century of Caring
1886·1986

©1986 The Upjohn Company

J-6138 January 1986

Consider the causative organisms...



Ceclor®
cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULD BE AOMINISTEREO CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS PENICILLINS ANO CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUOE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

|072886R|
PA 8794 AMP

©1987, ELI LILLY AND COMPANY

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

700241

Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

M. Fukuda
Mamoru Fukuda, MD, a Port Arthur orthopedic surgeon, died June 7, 1987.

Dr Fukuda, 57, was born in Japan and was a 1956 graduate of the Yamaguchi Prefectural School of Medicine. He served an internship and residency in Japan and in 1961 moved to Scotland and then to Canada for training in orthopedics. In 1966 Dr Fukuda moved to Boston for a residency at Carney Hospital. He moved to Port Arthur in 1969.

He is survived by his wife, Maureen Fukuda, Bridge City, Tex; sons, John Fukuda, Houston, and Mark Fukuda, Paul Fukuda, and Ainslie Fukuda, all of Bridge City; and brother, Masataro Fukuda, Ube, Japan.

J.S. Garner
James Scott Garner, MD, 51, Monahans, died June 2, 1987.

Dr Garner was born in Chattanooga, Tenn. He had been a resident of West Texas since 1980, when he moved to Kermit. In 1984, he moved to Monahans, where he also maintained an office.

Dr Garner received his medical education at the University of Tennessee in Memphis, graduating in 1961. He served for eight years as a commander with the US Public Health Service in Virginia, New Mexico, Louisiana, and Galveston, Tex. He practiced in Atlanta, Tex, before he moved to Kermit in 1980.

Surviving family members include his wife, Jackie Garner, Monahans; sons, Michael Garner, El Paso; David Garner, Odessa, Tex; and Todd Garner, San Marcos, Tex; daughter, Teresa Endsley, Queen City, Tex; father, Carl H. Garner, Spring City, Tenn; and four grandchildren.

E.G. Graves
Edwin Ghent Graves, MD, Houston, an honorary member of Texas Medical Association, died June 19, 1987, at age 89.

Born in Waco, Dr Graves spent his youth in Galveston. In 1920 he graduated from The University of Texas at Austin. He received his MD degree from Harvard Medical School in 1924 and then interned at Peter Brent Brigham Hospital in Boston. He returned to Texas, entering the practice of medicine with his father in Houston.

Dr Graves established the department of cardiology at The Methodist Hospital and served as its director for several years. In 1952 he was elected president of the hospital and remained on the staff as an emeritus senior attending physician. He also was clinical professor of medicine at Baylor College of Medicine.

Dr Graves served in the Navy during both World War I and World War II.

He is survived by his wife, Helen Cummings Graves, Houston; daughters, Marilyn Lummis, Houston, and Helen Stahmann, Toowoomba, Australia; son, Ghent Graves, Jr, MD, Logan, Utah; nine grandchildren; and 12 great-grandchildren.

A.H. Hill
Alfred H. Hill, MD, 76, a retired San Antonio psychiatrist, died June 13, 1987.

Dr Hill was born in Ohio. He completed undergraduate studies at Ohio Wesleyan University in Delaware, Ohio, and received a master of arts degree from Colgate University in Hamilton, NY. In 1938 he received his medical degree from Case Western Reserve University School of Medicine in Cleveland, Ohio. Dr Hill served an internship at Lakeside Hospital in Cleveland and a residency at Neurological Institute in New York City. During 1942–1945, he was stationed at the School of Aviation Medicine at Randolph Field in San Antonio, where he served as chief of the department of neurology during 1944–1945. He began a private practice in neurology and psychiatry in San Antonio in 1946. He retired from the practice of medicine in 1983.

Dr Hill was a past president of the Texas Neuropsychiatric Association and the Texas Chapter of the American Psychiatric Association. He served as chairman of the TMA Section on Nervous and Mental Diseases and as chairman of the Bexar County Medical Society Board of Trustees. He was the first head of the department of neurology and psychiatry at Methodist Hospital in San Antonio.

Surviving family members include his wife, Janet C. Hill, San Antonio; sons, Russell Cory Hill, Katy, Tex; and Alfred H. Hill, Jr, and Rowland Bruce Hill, both of San Antonio; brothers, C.C. Hill, Dallas, and J.T. Hill, Ashtabula, Ohio; and five grandchildren.

M.R. Lawler
Marion Russell Lawler, MD, a Mercedes, Tex, physician for 56 years, died May 28, 1987. He was 81.

Dr Lawler was born in Deport, Tex, and attended Southern Methodist University. In 1929 he graduated from Vanderbilt University School of Medicine in Nashville, Tenn. He served an internship and residency at Parkland Memorial Hospital in Dallas. He moved to Mercedes in 1931. In 1935 Dr Lawler was elected president of the Hidalgo-Starr County Medical Society. On Jan 27, 1987, Dr Lawler was named recipient of the Mercedes Chamber of Commerce's first "Lifetime Service Award."

Survivors include his sons, John F. Lawler, MD, Evansville, Ind, and Marion Lawler, Jr, MD, Harlingen, Tex; daughters, Mildred Brown, Dallas, and Rose Mary Jordan, Franklin, Tenn; sisters, Kittye Ruth Cole, Enterprise, Ala, and Francis Elayne Lee, Arlington, Tex; and ten grandchildren.

J.R. Morgan
James Roderick Morgan, MD, an El Paso obstetrician-gynecologist, died June 1, 1987. He was 66.

Dr Morgan was born in Kennard, Tex, and received his premedical education at The University of Texas at Austin, graduating with a bachelor of arts degree in 1948. In 1952 he received his medical degree from Southwestern Medical School in Dallas. He moved to El Paso in 1952 for an internship at El Paso General Hospital. After a two-year general practice, Dr Morgan began a residency at St Joseph's Maternity Hospital in Houston, followed by residency training at Victoria Infirmary in Glasgow, Scotland, and at M.D. Anderson Hospital and Tumor Institute in Houston. He returned to El Paso to specialize in obstetrics and gynecology.

Survivors include his wife, Barbara Morgan, El Paso; sons,

James R. Morgan, Jr, Tulsa, Okla, and William T. Morgan, Dallas; daughter, Mary Pat Scott, El Paso; sister, Billie Sue Mitchell, Kinnear, Wyo; and three grandchildren.

J.A. Smith

Jess Anthony Smith, MD, 41, a Houston ophthalmologist, died June 19, 1987.

Dr Smith was a native of Marksville, La. He received a BA degree in 1967 from Baylor University in Waco and his medical degree in 1971 from Baylor College of Medicine in Houston. His internship and residency were completed at the Medical College of Georgia in Augusta. Dr Smith moved to Houston in 1976 after completing a postgraduate fellowship at the Baseom Palmer Eye Institute in Miami, Fla.

He is survived by his parents, Mr and Mrs Arno Snoddy, Marksville, La.

A.F. Tasch

Aloysious (Al) F. Tasch, MD, an honorary member of Texas Medical Association, died June 30, 1987. He was 83.

Dr Tasch served as county health officer and director of San Patricio County from 1950 until his retirement in 1985. He also was consulting physician of the County Mental Health Clinic in Sinton during 1960–1987.

Born in Chicago, Dr Tasch was a 1936 graduate of the University of Illinois College of Medicine. He interned at Santa Rosa Hospital in San Antonio and was a psychiatric resident at San Antonio State Hospital. During 1939–1941, Dr Tasch was director of the psychopathic division at Parkland Memorial Hospital in Dallas. He began his general practice in Taft, Tex, in 1941. During 1942–1946, he served in the US Army Air Corps, attaining the rank of major. He then returned to Taft, continuing a general practice of medicine and surgery.

Surviving family members include his wife, Dorothy Hoppe Tasch, Taft; son, Al F. Tasch, Jr, PhD, Austin; daughter, Mary Jo Snider, McLean, Va; sister, Betty Pelikan, Portland, Ore; and six grandchildren.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

M. FUKUDA
Port Arthur, 1929–1987

J. S. GARNER
Monahans, 1936–1987

E. G. GRAVES
Houston, 1898–1987

A. H. HILL
San Antonio, 1911–1987

M. R. LAWLER
Mercedes, 1906–1987

J. R. MORGAN
El Paso, 1920–1987

J. A. SMITH
Houston, 1945–1987

A. F. TASCH
Taft, 1903–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audiovisual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student $ 5.00 ☐ Patron $ 100.00
☐ Sustaining $15.00 ☐ Life $1,000.00
☐ Subscribing $25.00

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Baroff GS: *Mental Retardation. Nature, Cause, and Management,* ed 2. Washington, Hemisphere Publishing Corporation, 1986.

Bassett LW, Gold RH (eds): *Breast Cancer Detection. Mammography and Other Methods in Breast Imaging,* ed 2. Orlando, Fla, Grune & Stratton, Inc, 1987.

Bennett MJ, Edmonds DK (eds): *Spontaneous and Recurrent Abortion.* Boston, Blackwell Scientific Publications, 1987.

Blackledge G, Chan KK: *Management of Ovarian Cancer.* Boston, Butterworths, 1986.

Brant-Zawadzki M, Norman D (eds): *Magnetic Resonance Imaging of the Central Nervous System.* New York, Raven Press, 1987.

Bready LL, Smith RB: *Decision Making in Anesthesiology.* Philadelphia, B.C. Decker Inc, 1987.

Buchele M, Wynn-Williams S: *Succesful Private Practice. A Guide to Effective Medical Practice Management.* New York, Churchill Livingstone, 1987.

Colman RW, Hirsh J, Marder VJ, et al (eds): *Hemostasis and Thrombosis. Basic Principles and Clinical Practice,* ed 2. Philadelphia, J.B. Lippincott Company, 1987.

Cooper AM, Frances AJ, Sacks MH: *Psychiatry. The Personality Disorders and Neuroses* (6 vols). Philadelphia, J.B. Lippincott Company, 1986.

Dixon JA: *Surgical Application of Lasers,* ed 2. Chicago, Year Book Medical Publishers, Inc, 1987.

Dyck PJ, Thomas PK, Asbury AK, et al (eds): *Diabetic Neuropathy.* Philadelphia, W.B. Saunders Company, 1987.

Flex Review. Preparation for the Federation Licensing Examination, ed 3. New York, Medical Examination Publishing Company, 1987.

Froelicher VF: *Exercise and the Heart,* ed 2. Chicago, Year Book Medical Publishers, Inc, 1987.

Goldman JL (ed): *The Principles and Practice of Rhinology. A Text on the Diseases and Surgery of the Nose and Paranasal Sinuses.* New York, John Wiley & Sons, 1987.

Griffen WO Jr, Printen KJ (eds): *Surgical Management of Morbid Obesity.* New York, Marcel Dekker, Inc, 1987.

Harbert JC: *Nuclear Medicine Therapy.* New York, Thieme Medical Publishers, Inc, 1987.

Holliday MA, Barratt TM, Vernier RL: *Pediatric Nephrology,* ed 2. Baltimore, Williams & Wilkins, 1987.

Lazes PM, Kaplan LH, Gordon KA: *The Handbook of Health Education,* ed 2. Rockville, Md, Aspen Publishers, Inc, 1987.

Mansfield PK: *Pregnancy for Older Women. Assessing the Medical Risks.* New York, Praeger Publishers, 1986.

Marks IM: *Fears, Phobias, and Rituals. Panic, Anxiety, and Their Disorders.* New York, Oxford University Press, 1987.

Misiewicz JJ, Pounder RE, Venables CW (eds): *Diseases of the Gut and Pancreas.* Boston, Blackwell Scientific Publications, 1987.

Oertel YC: *Fine Needle Aspiration of the Breast.* Boston, Butterworths, 1987.

Parrillo JE, Masur H (eds): *The Critically Ill Immunosuppressed Patient. Diagnosis and Management.* Rockville, Md, Aspen Publishers, Inc, 1987.

Pavlov H, Torg JS: *The Running Athlete: Roentgenograms and Remedies.* Chicago, Year Book Medical Publishers, Inc, 1987.

Pitt B (ed): *Dementia.* New York, Churchill Livingstone, 1987.

Ravitch MM, Steichen FM: *Principles and Practice of Surgical Stapling.* Chicago, Year Book Medical Publishers, Inc, 1987.

Stux G, Pomeranz B: *Acupuncture. Textbook and Atlas.* New York, Springer-Verlag, 1987.

Surwit EA, Alberts DS (eds): *Cervix Cancer.* Boston, Martinus Nijhoff Publishers, 1987.

Terzis JK: *Microreconstruction of Nerve Injuries.* Philadelphia, W.B. Saunders Company, 1987.

Vandenberg SG, Singer SM, Pauls DL: *The Heredity of Behavior Disorders in Adults and Children.* New York, Plenum Medical Book Company, 1986.

Wetterer A, von Troschke J: *Smoker Motivation. A Review of Contemporary Literature.* New York, Springer-Verlag, 1986.

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
Suite 407, West Houston Doctors Center, 12121 Richmond Avenue, Houston 77082; 713 496-1006

THE UNIVERSITY CENTER FOR PAIN MEDICINE AT HERMANN
Hermann Hospital, 6411 Fannin, Houston, Texas 77030
713 797-2732

A multidisciplinary center which offers comprehensive treatment options for acute, subacute, and chronic pain patients. The center's total management of each patient's pain recognizes both the central *and* peripheral components of the syndrome.

PRITHVI RAJ, MD, FACA, FFARCS
Orthopaedist
Diplomate American Board of Anesthesiology

SHELLY LISS, MD
American Board of Physical Medicine and Rehabilitation

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
COLON & RECTAL SURGEON
OUT-PATIENT LASER HEMORRHOIDECTOMY

Bowel obstruction from cancer of the colon, volvulus, Crohn's or ulcerative colitis, toxic megacolon, diverticular obstruction, acute or chronic colon bleeding, colovesicle fistula, rectovaginal fistula, rectal fistulas, rectal prolapse, anal incontinence, warts, pruritus ani, rectal abscesses, hemorrhoids and other rectal conditions.

Emergency consultations and referrals; weekends and evenings.

Privileged at Baylor University Medical Center and Methodist Central Hospital.

214 821-4300, answered 24 hours and weekends
214 341-0859, residence

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP
Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD
Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO
James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS
David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building 8,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY
For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

HERMANN SKIN DISEASE TREATMENT CENTER
Hermann Hospital, 6411 Fannin, Houston, Texas 77030; 713 792-5115
A comprehensive outpatient facility specializing in the treatment of psoriasis and other conditions requiring intensive topical care and ultraviolet light treatment.
Robert E. Jordon, MD
Medical Director, Hermann Skin Disease Treatment Center
Professor and Chairman, Department of Dermatology
University of Texas Medical School at Houston

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY
Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA
Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism
Practice Limited to Endocrinology & Diabetes
5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

TMA Physician Placement Service
. . . Another service of your association

ERIC A. ORZECK, MD, FACP
Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

FAMILY PRACTICE

THE FAMILY MEDICAL CENTER
Katherine S. Henry, MD, PA
Michele D. Reynolds, MD
Diplomates, American Board of Family Practice
Providing comprehensive family medical care, gynecologic and surgical services, and internal medicine diagnostics.
721 W. Arapaho #2, Richardson, Texas 75080; 214 234-4776

GASTROENTEROLOGY

HERBERT A. BAILEY, MD
Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE
David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery
General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS
Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD
Diplomate American Board of Orthopaedic Surgery
DAVID J. ZEHR, MD—Microsurgery
ARNOLD V. DiBELLA, MD
Hand Surgery and
Upper Extremity Reconstructive Surgery
3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA
Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA
Diplomates American Board of Orthopaedic Surgery
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS

Hand Surgery and Reconstructive Surgery of the Upper Extremity

St. Paul Professional Building, Suite 812, S9S9 Harry Hines Blvd., Dallas, Texas 7S23S; 214 631-7488

Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas 7S230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS

Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue, Dallas, Texas 7S246; Office 214 823-9440

ROBERT A. ERSEK, MD

Diplomate of American Board of Plastic Surgery

Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone B17 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS

Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation

Baylor Medical Plaza, 3B00 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite B116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA

Neal R. Reisman, MD, FACS

Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7S1S S. Main, Suite 500, Houston 77030; 713 79S-S3S3
12121 Richmond, Suite 211, Houston 770B2; 713 558-53S3
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

HAND, MICROVASCULAR AND REPLANTATION SERVICE

Treatment of traumatic and non-traumatic injuries of the hand and wrist, soft tissue problems of the upper extremity and reconstructive hand surgery.

David H. Hildreth, MD
Diplomate American Board of Orthopaedic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Orthopaedic Surgery
The University of Texas Medical School at Houston; 713 792-5994

Dennis P. Maher, MD
Diplomate American Board of Plastic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Plastic and Reconstructive Surgery
The University of Texas Medical School at Houston; 713 792-5473

For more information call 1-B00-392-LIFE
6431 Fannin Street, Houston, Texas 77030

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON NEUROSURGERY ASSOCIATION

Neurological Surgery and Microneurosurgery

R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Dinlomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 7S246; Telephone 214 B26-7060

TMA HealthWise Series

. . . Another service of your association

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American Board of Neurological Surgery

1S22 Cooper, Fort Worth, Texas 76104; B17 336-1300

DALLAS NEUROSURGICAL ASSOCIATION

Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
Casey E. Patterson, MD (Retired)
W. Robert Hudgins, MD
Richard H. Jackson, MD

St. Paul Professional Bldg., 5959 Harry Hines Blvd., Suite 620, Dallas, Texas 7S23S; 214 637-0420

Presbyterian Professional Bldg., 8210 Walnut Hill Lane, Suite 905; Dallas, Texas 7S231; 214 369-7S96

ARLINGTON ASSOCIATION OF NEUROLOGICAL SURGEONS

Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; B17 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES

900 South Loop West, #100
Houston, Texas 77054

Electroencephalography

EEG service via telephone transmission to hospitals, clinics and private offices.

Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0S40
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

OCCUPATIONAL MEDICINE

ERIC G. COMSTOCK, MD

Diplomate, American Board of Medical Toxicology

Occupational and Environmental Toxicology

6910 Bellaire Blvd., Suite #12, Houston, Texas 77074
Phone 713 S41-3214

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES

Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 7S231; 214 692-6941 or 800 B72-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 B21-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 7S204
214 S21-1153; 1-B00-442-S376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 7B20S; 512 226-S191

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 7747B
713 242-BB41

12121 Richmond Ave., Suite 317, Houston, Texas 770B2
713 SS6-S7S7

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 S4S-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite S03, Fort Worth, Texas 76104; B17 33B-41B3

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD
Van W. Teeters, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
1-800-833-5921 or 713 524-1111

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS
Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD
John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2BSS Gramercy, Houston, Texas 77025; 713 66B-6B2B

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002; 713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas 770S7; 713 7B2-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030; 713 797-1777

Heights Medical Eye Center, S3S West 20th Street, Houston, Texas 77008; 713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Schubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 7S204; 214 S21-2191

FORT WORTH BONE & JOINT CLINIC

91B Bth Avenue, Fort Worth, Texas; 817 33S-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

F. Carlton Hodges, MD
J. Price Brock, Jr, MD
John H. Judd, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

TMA Physicians Benevolent Fund
. . . Another service of your association

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA

ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

SAN ANTONIO HEAD & NECK SURGICAL ASSOCIATES, PA

Board Certified Otolaryngologists

Julius F. Marlowe, MD
Michael H. Bertino, MD
G. Paul Laursen, DDS, MD, FACS, FAAFPRS
Harry Schilling, MD
Stephen J. Talley, MD

ENT, Facial Plastic Surgery, Lipo-Suction

Madison Square Medical Building, Suite 304, 311 Camden, San Antonio,
Texas 78215; 512 224-5481

Physicians' Plaza, Suite 370, 8038 Wurzbach Road, San Antonio, Texas
78229; 512 690-1326

PATHOLOGY

FORT WORTH PATHOLOGY LABORATORY

Dorothy Patras, MD, Director
John E. McDonald, MD

Anatomic Pathology and Consultation in Clinical Pathology

1425 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.

J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738 .
Mailing Containers on Request—Office Pickup Service in Houston

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD
John E. Lomax, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery
6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; 817 336-0446

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD
Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 817 332-9441 817 335-4755

WILLIAM E. BARNES, MD

Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION
Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN
Robert A. Ersek, MD, FACS
Diplomate of American Board of Plastic Surgery

Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 78705
24 HR# 512 479-6805 & 512 474-HAND

BURN CARE ASSOCIATES
The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD
Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS
Excellence in Form & Function

Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 558-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional Building, The Houstonian

SAEED BEG, MD, PA
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive Surgery, Hand Surgery

2602 Texas Drive, Irving, Texas 75062
Phone 214 258-0025

PSYCHIATRY

RICHARD G. JAECKLE, MD
Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

Representing TMA's legislative views
. . . Another service of your association

TIMBERLAWN PSYCHIATRIC HOSPITAL
Inpatient and Outpatient Services for Child, Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 381-7181

GONZALO A. AILLON, MD
Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

DALLAS PSYCHIATRIC ASSOCIATES
A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

C. MARSHALL BRADSHAW, MD, PA
Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

TMA Physician Membership Directory
. . . Another service of your association

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIATION ONCOLOGY

RADIATION ONCOLOGY AT MEMORIAL SOUTHWEST HOSPITAL, HOUSTON

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS

Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7873

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

TMA Action monthly newsletter

. . . Another service of your association

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS

Diplomate, American Board of Urology

Adult and Pediatric Urology

Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES

Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology

221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

C. F. SKRIPKA, JR, MD, FACS

Urology, Andrology & Neurourology

1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Psychiatrist—The Laredo State Center has an opening for a full-time phychiatrist. Valid Texas license. Board certified or eligible. Coordinates and supervises all medical and psychiatric treatment services. If interested, contact the Laredo State Center, 512 723-2926, P.O. Box 1835, Laredo, Texas 78044-1835. EOE.

Staff Psychiatrist—Opening for staff psychiatrist in largely geropsychiatric, JCAH and Medicare accredited hospital. Salary up to $72,304 for board certified psychiatrist and up to $65,100 for board eligible psychiatrist. Patient census 430 to 450. Nineteen member medical staff includes nine psychiatrists and three neurologists. Excellent location in the Texas Hill Country, one hour from San Antonio. Good fringe benefits. Must have Texas license. Call or write G. W. Harrelson, Jr., MD, Clinical Director, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78029-1468; 512 896-2211. An EEO/AAP employer.

Cardiologist, group practice, 60 physician acute care, 140-bed Air Force Hospital with family residency program. Referrals from over 25,000 medical/surgical outpatient visits per month. All malpractice insurance paid. May be eligible for bonus pay and moving expenses. Practice in a brand new medical complex at Carswell AFB in Fort Worth, Texas. Minimum salary $55,255. Contact 817 735-7865.

Physician—$56,856 plus up to $3,000 additional compensation subject to approval. Group health insurance plus all state benefits including retirement. Must be licensed in Texas as MD or DO. Contact Mexia State School, P.O. Box 1132, Mexia, Texas 76667. Phone 817 562-2821. An equal opportunity/affirmative action employer and does not discriminate against the handicapped.

Physician with Texas license needed to practice general medicine at Student Health Center. Forty hour week, Monday-Friday. Minimal call duty. Fringe benefits. Contact Sheila Meyer, Administrator, North Texas State University Health Center, P.O. Box 5158, Denton, Texas 76203, 817 565-2331. Equal opportunity/affirmative action employer.

Radiologist needed—recruiting for board certified/board eligible radiologist. Proficiency in interventional skills required. Faculty appointment possible for qualified candidate. English fluency required. Excellent benefit package. Contact: Chief, Radiology Service, Olin E. Teague Veterans' Center, 1901 First Street, Temple, Texas 76501, call 817 778-4811, ext. 4175. Equal opportunity employer.

Project Investigator who will study the mechanism of **abl** oncogene induced tumorigenesis in human chronic myelogenous (CML). These studies include: purification of protein kinases activity related to $P210^{bcr\text{-}abl}$ in CML patients and the effect of **bcr-abl** gene expression on the development and progression of CML disease. Required knowledge includes: 1) RNA tumor viruses, oncogenes and hybridoma, 2) enzyme purification, 3) kinase assays, 4) immunoassays, 5) phospho amino acid analysis, 6) peptide mapping, 7) peptide synthesis and 8) production of mono- and polyclonal antibodies. Background in medical sciences or clinical oncology and oncogene-related field. PhD in Biochemistry/Virology or related field. 40 hours/week. $17,000 annual salary. Contact Texas Employment Commission, Houston, Texas or send resume to Texas Employment Commission, Placement Unit, Austin, Texas 78778. J.O. #4793549. Ad paid for by an equal employment opportunity employer.

Assistant Professor/Associate Director—Methodist Hospitals of Dallas Family Practice Residency Program, affiliate of The University of Texas Health Science Center at Dallas, seeks residency trained, board certified family physician with practice experience, broad clinical skills to include obstetrics. Responsible for operation of Family Practice Center, resident teaching and supervision. Research skills/interest strongly desired but not required. Salary and benefits competitive. Send reply and CV and cover letter and three references to Leonard W. Morgan, PhD, MD, Methodist Hospitals of Dallas Family Practice Residency Program, 3400 W. Wheatland Rd., Dallas, Texas 75237-3458. UTHSCD and Methodist Hospitals of Dallas are affirmative action, equal opportunity employers.

Faculty Position—The University of Texas Health Science Center and Parkland Memorial Hospital, Dallas, Texas are seeking a physician as Assistant Professor of Clinical Internal Medicine to be part of an expanding team and to help direct and coordinate clinical AIDS activities at the hospital. The physician will be involved in inpatient and outpatient care and will be expected to engage in clinical or epidemiological research. A subspecialist in infectious diseases is desired but applicants specialized in other relevant clinical disciplines are also encouraged to reply. Direct inquiries to James P. Luby, MD, Department of Internal Medicine, 5323 Harry Hines Blvd., Dallas, Texas 75235. UTHSCD and PMH are equal opportunity employers.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas: Full time ED positions available in the greater Houston area with local group. Please send CV to STAT Physicians, P.O. Box 79348, Houston, Texas 77279-9348; or call 713 468-7810.

Texas—Full-time ED positions available in North Texas area. Small group, flexible scheduling. ACLS and US education required. Send CV to Ms. Neu, Numed Systems, P.O. Box 2122, Denton, Texas 76202.

MediClinic Houston is now offering immediate openings for full-time positions for career minded physicians. Part-time and weekend coverage also available in all five clinic locations. Excellent remuneration and paid malpractice insurance. Please send CV to MediClinic, 6604 Southwest Freeway, Houston, Texas 77074 or call M. A. Fazlani, MD, 713 468-7991.

Texas, Abilene: Regional trauma center needs additional full-time emergency physicians. City of 100,000 within a 17-county referral area. Two universities and one college. Several area lakes. $90,000+/year. Contact: Helen Meyer, 8700 Crownhill Road, Suite 600, San Antonio, Texas 78209, 512 732-5000.

Texas, College Station: Immediate full-time positions available at a brand new facility. Home to Texas A&M University. Surrounded by national forests, state parks and lakes. Midsize town with good schools near major metropolitan areas. $89,000+/year with paid malpractice insurance. Contact: Helen Meyer, 8700 Crownhill Road, Suite 600, San Antonio, Texas 78209, 512 732-5000.

Texas, San Antonio: Full-time at a suburban hospital. Charming small town atmosphere in a large city. Numerous colleges and universities. Wide variety of cultural events. Minutes away from hunting, fishing, and boating. $92,000/year. Contact: Helen Meyer, 8700 Crownhill Road, Suite 600, San Antonio, Texas 78209, 512 732-5000.

Physician wanted for long term partnership in established family practice/emergency clinic, starting in September or early October. Good benefits. Hours 4-10 pm, M-F with an occasional weekend. Call 713 890-3010, Houston, Texas for additional information. Non-smoker please.

Texas, Weslaco—Full time position available at a Valley emergency department. Enjoy border shopping and beaches. Volume 13,000/year. $80,000-$100,000/year. Contact: Helen Meyer, 8700 Crownhill Rd., Suite 600, San Antonio, Texas 78209; 512 732-5000.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Family practice physician for 10-member multi-specialty group located in the Rio Grande Valley. Clinic has six family practice physicians. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Family practice physician (BC/BE) to associate with established FP in clinic in small, scenic Hill Country town near San Antonio. Primarily ambulatory/emergency practice with some surgery. Salary plus incentive. Partnership possible. J. E. McCoy, MD, 120 Medical Drive, Boerne, Texas 78006; 512 249-9307.

Raise your family in a friendly small town with the convenience of a large city just 30 miles away. Excellent schools. New hospital and new clinic needs a family practice physician interested in practicing medicine in West Texas. Contact Charles Butts, Administrator, Crane Memorial Hospital, 1310 S. Alford, Crane, Texas 79731; 915 558-3555.

Houston suburban. Busy FP needs help with large, growing practice. Please send CV to W. Sanford Smith, Professional Practice Management, Inc., 900 Rockmead, Kingwood, Texas 77339; 713 358-8113.

Progressive rural community in northwestern Texas Panhandle looking for family practice physician. Lucrative future, fee-for-service practice with financial guarantees, plus benefit package. Three doctor group, fully staffed clinic, 30-bed hospital, 60-bed nursing home, strong Ag/Industrial area. Quality lifestyle, excellent school system, active churches. Contact Robert Neelley, President, Doctor Search Committee, P.O. Box 549, Friona, Texas 79035; 806 247-2706.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"

locum tenens & permanent placements

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

Dallas Vicinity—Immediate need for recently-trained, BC FP to associate with small FP group in NE Texas county of 67,000. OB preferred. Modern, 150-bed hospital. Lucrative practice potential; generous incentive package; early partnership. Excellent lifestyle in family-oriented community; excellent economy. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

San Antonio Vicinity—Seeking board certified FP desiring full range of family medicine, including OB. Modern hospital, new office space adjacent to hospital. No evening or weekend ER call required. Share call with young, BC FP. Excellent incentive package. Hunting mecca. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Rural Colorado—BC/BE family practitioner to join three FPs in growing multispecialty group. Excellent opportunity for person interested in rural living, mountain recreation, health care delivery for medically underserved populations. Send CV to Michael Bloom, 204 Carson Avenue, Alamosa, Colorado 81101; 303 589-5161.

Family Practice—An excellent opportunity is currently available in beautiful Austin. Easily expandable practice currently has no OB or hospital work. Grossing $200,000+. Solid patient base uses cash and private insurance. Will introduce. Minutes away from cultural and recreational activities. Contact Ad-676, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Houston, Texas, Licensed Physicians—Family practice or GP, ER. Hospital based, full time positions. Physician oriented multispecialty group with a minimum guarantee. Send CV or contact 713 464-4636 or P.O. Box 770549, Houston, Texas 77215.

Family physician needed to work for another physician in Bryan, Texas to provide medical services to patients including internal medicine, pediatrics, OBG, minor surgery and geriatrics. Comprehensive medical services for members of family on continuing basis. Examine patients; elicit and record information about patients' health, order or execute various tests and x-rays on patients' condition. Analyze, report and diagnose condition, administer treatments and medications. Vaccinate patients to immunize them from communicative disease. Refer patients to specialists when necessary. Must have MD diploma plus one year internship. Salary $50,000 per year, 40 hours per week. Apply at the Texas Employment Commission, Bryan, Texas or send resume to Texas Employment Commission, TEC Building, Austin, Texas 78778. J.O. #4793447. Ad paid for by an equal employment opportunity employer.

Family physician needed to work for another physician in Clarksville, Texas to provide medical services to patients including internal medicine, pediatrics, OBG, minor surgery and geriatrics. Comprehensive medical services for members of family on continuing basis. Examine patients; elicit and record information about patients' health, order or execute various tests and x-rays on patients' condition. Analyze, report and diagnose condition, administer treatments and medications. Vaccinate patients to immunize them from communicative disease. Refer patients to specialists when necessary. Must have MD diploma plus one year internship, and one year experience. Salary $50,000 per year, 40 hours per week. Apply at the Texas Employment Commission, Paris, Texas or send resume to Texas Employment Commission, 165 6th Street SE, Paris, Texas 75460. J.O. #4793772. Ad paid for by an equal employment opportunity employer.

FP/GP or ER medicine physician wanted for full time position in metropolitan San Antonio in a minor emergency clinic. Salary and benefits guaranteed with the opportunity for partnership. Reply with CV to Jeanne Lonati, Business Manager, 1952 SW Military Drive, San Antonio, Texas 78221; 512 921-0181.

Family Physician—(BC, BE) to join established family clinic in the beautiful area of East Texas. Quality of life is excellent. Good practice opportunity with above average financial package. Send CV to Jerry Chapman, Glenwood Clinic, 1400 College Drive, Texarkana, Texas 75503; 214 793-5671.

Need retired or semi-retired generalist, internist, etc. interested in working 1-2 days a week in walk-in clinic in Central Texas. Light work load with $300/day compensation. Contact Ad-678, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Family practice physician needed for two person practice in a non-profit community clinic in San Antonio, Texas. Spanish speaking preferred. Daytime hours. Minimal call. Contact Dr. John Berman, 512 223-2342.

Dallas Area—Immediate need for recently trained BC FP to associate with 21-person multispecialty group. Shared call. No OB. Modern, 90-bed hospital adjacent to professional office building. Competitive salary plus benefits, early association. For information without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Internal Medicine

Progressive Central Texas community of 5,600 (within one hour of Austin) seeks BE/BC general internist. Modern hospital; competitive incentive package including income guarantee, professional office space, etc. Award winning schools. Excellent lifestyle in family-oriented community; good economy. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

BE/BC general internist for associate practice in Panhandle community of 25,000 (service area population). Modern 126-bed hospital. Competitive incentive package. Many area amenities and recreational activities. Easy access to Amarillo and airport. For information, without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Austin Vicinity—Busy internal medicine practice available in popular community. Fourway shared call coverage. Established practice with proven capability to generate lucrative income in a desirable community offering an excellent lifestyle. Includes all equipment and furnishings. Reasonable price and terms. Contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Dallas Area—Immediate need for recently trained, BE/BC general internist to associate with 21-person multispecialty group. Shared call. Modern, 90-bed hospital adjacent to professional office building. Competitive salary plus benefits, early association. For information, without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

OBG physician for 10-member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Fort Worth Vicinity—Immediate need for BE/BC OBG. Attractive, affluent community; strong economy. Recreational mecca. Modern hospital. Share call with young, American-trained, BC OBG. Competitive incentive package. Easy access to D/FW. For information, without cost or obligation, contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

OBG, Houston, Texas—Solo practitioner seeking partner. Supported by 200+ bed hospital with strong maternity, community awareness, marketing programs. Compensation $120K salary plus percentage, paid malpractice, health insurance, profit sharing, pension plan, relocation, CME, vacation. Coverage. Contact Bob Sweat, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 30350. Call 404 641-6411.

Central Texas—Immediate need for two BE/BC OBGs. Adjacent communities seek two OBGs to accommodate lucrative market in rural Central Texas communities. Need cooperative effort to share call, and render badly needed services. Modern hospitals. Competitive incentive packages. Excellent lifestyle in family-oriented communities. For information, without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Orthopedic Surgery

Wanted—Board qualified orthopedic surgeon with training in hand surgery to work in orthopedic group in West Texas city. Ultimate full partnership planned. Medical school affiliation possible. 806 799-1380.

Orthopedic Surgeon—Immediate need for BE/BC physician to serve two adjacent Central Texas communities. Group or solo with call coverage. Modern hospital equipment and facilities. Competitive incentive package, including income guarantee, office space, etc. Progressive communities. Great schools. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Opportunity for a board certified/eligible orthopedic surgeon, university trained, to join busy five man general orthopedic practice. Good location offering a good family atmosphere and recreational opportunities. Service area of 150,000 with an excellent medical community including subspecialty backup. Competitive salary and benefits with future partnership possible. Send inquiries with CV to Ad-679, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Pediatrics

Pediatrician, Brownsville, Texas—Vacation area near the ocean and Mexico. Enjoy practice in a modern, spacious, custom built clinic with lab, x-ray. Pleasant hours, good beginning salary. Contact Adele Bromiley, MD, 2335 Central Blvd., Brownsville, Texas 78520; 512 546-3126.

Dallas Area—Established general pediatric practice for sale. Grossing in excess of $270,000 per year. Shared call coverage. Includes all equipment and furnishings. Reasonable price and terms. Across street from modern hospital. For information without cost or obligation contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Position for board certified/eligible radiologist with experience in US, CT, nuclear medicine, mammography, angiography and interventional radiology. Join group serving clinic and two community hospitals in Central Texas. Salary leading to partnership. Reply to 2027 S. 61st, Suite 116, Temple, Texas 76501; 817 774-9994.

South Texas Diagnostic BC Radiologist Needed—158 bed hospital, outpatient clinic. CT, mammo, US, NM, DSA, interventional and general radiology (MRI possible in near future). Early equal benefits for right person. Send CV to P.O. Box 5567, Brownsville, Texas 78520.

Radiologists are needed for a variety of positions in Texas as well as other states. Opportunities exist in the areas of locum tenens, practice trials and permanent placement. For more information call toll free 1-800-531-1122 or write Kenneth W. Teufel, MD, PRN, Ltd., One Thousand North Walnut, Suite A, New Braunfels, Texas 78130.

Diagnostic Radiologist—Immediate need for recently trained, BC physician to associate with established radiology group serving regional medical center. All modalities, including MRI and interventional radiology. Family-oriented community; strong economy. Easy access to D/FW. Excellent incentive package; early partnership. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

DO & MD, BC Radiologist—Licensed any state. Contact Janis Edwards, RN, 3300 NW 23rd, Oklahoma City, Oklahoma 73107; 405 340-8888.

Other Opportunities

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Joyce Staffel, Medical Division, JSI, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-0475.

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, Gonzaba Medical Group, 720 Pleasanton Road, San Antonio, Texas 78214.

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities

throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or BE physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. Box 2000, Edinburg, Texas 7B539; 512 383-1481.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include OBG, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-B0B0; or send CV to Mitchell & Associates, Inc., P.O. Box 1B04, Scottsdale, Arizona B5252.

Full and part-time experienced physicians for established and expanding family care clinic in Northwest Houston. Excellent remuneration and working conditions; flexible scheduling. Contact Director, Medical Center, 792S FM 1960 West, Houston, Texas 77070; 713 469-4560.

Expanding 20-physician multispecialty group has excellent opportunity for the following specialists: family practitioner, pediatrician, OBG, orthopaedic surgeon, and dermatologist. High beginning guaranteed salary in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Administrator, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720.

Expanding Texas Multispecialty Group—Dallas/Fort Worth, requires BE/BC physicians: Internal medicine, OBG, family practice, orthopedic surgery, anesthesiology, general surgery, pediatrics, radiology, urology, dermatology, psychiatry. Competitive salary. Extensive benefits. Direct inquiry, CV to: Medical Director, Permanente Medical Association of Texas, 12720 Hillcrest, Suite 600, Dallas, Texas 7S230.

Solo otolaryngologist—unopposed—retiring for health reasons. Twenty-eight miles east of Dallas. Large draw, varied patient load. AMI affiliated with guarantee. Sell practice at whatever suits you. Turn key or "?". Multispecialty within complex. Many amenities. Call direct 214 563-3323 or write for detailed prospectus to J. M. Anthony, MD, 15S3 Hwy. 34 South, Suite 800, Terrell, Texas 7S160.

Great Texas Opportunities—Substantial income guarantees, free office space, MP insurance paid. Large cities, suburbs, large-small towns. FPs, OBGs, PDs, IMs, NSs, GPs. Call or send CV to Nancy McEntire, CPC or Ray Carter, McEntire Carter Associates, 9500 Jollyville Road, #142, Austin, Texas 78759; 512 34S-7327.

South Texas—Immediate opening for board certified anesthesiologist in 1B0-bed hospital with an all-MD anesthesia service. Please send CV to Administrator, P.O. Box 1110, Weslaco, Texas 7B596.

Otolaryngologist—Immediate opportunity for BE/BC physician in Northeast Texas community of 27,000 (service area pop. 1S0,000) regional medical center. Quality lifestyle in area with strong economy; easy access to D/FW Metroplex. Shared call coverage; incentive package available. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; B17 S95-1128.

Neurosurgeon—Immediate opportunity for BE/BC physician with regional medical center in Northeast Texas (service area population 1S0,000). State-of-the-art technology available; large referral base. Quality lifestyle in a community with strong economy; easy access to Metroplex. Incentive package. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; B17 595-112B.

Dallas/Fort Worth Area—First Texas Medical Associates, PA is a growing, multispecialty group practice in the Dallas/Fort Worth area. Denton County, Texas is one of the fastest growing counties in the U.S. Due to this growth, we are recruiting board eligible/certified physicians to meet our needs. Physicians receive a salary and bonus consideration with liberal benefits and the opportunity to become an associate of the group. We have no jr/sr partners and strive to provide an atmosphere that ensures the practice of good medicine. If interested in the opportunities offered to practice with this dynamic group, call 214 420-1484 or send CV to: Margaret Bacon, FTM Associates, PA, S60 W. Main St., Suite 202, Lewisville, Texas 75067.

Excellent Texas Opportunities—ENT, family practitioner, general practitioner, general surgeon, internal medicine, OBG, ophthalmologist, orthopedic surgeon, oncologist, pediatrician, vascular surgeon, to practice in one of several lake area communities, in the beautiful Piney Woods area of East Texas. Excellent quality of life, first year guarantee, etc. Other Texas opportunities available also. Reply with CV to Medical Support Services, Armando L. Frezza, 8B06 Balcones Club Dr., Austin, Texas 78750; 512 331-4164.

Wanted medical experts in the field of x-ray, proctology, general surgery, orthopedic surgery and cardiology. Send your CV to 11B Olympus Way, Jupiter, Florida 33477 or phone 30S S7S-0505.

Anesthesiologist wanted to join an established group of four MDs and seven CRNAs in South Texas (Rio Grande Valley). Must be BC or BE. Send CV to Valley Anesthesia Associates, 1702 Ed Carey Drive, Harlingen, Texas 7B550.

Wanted—A few good physicians (OBG, family practice, internal medicine, general surgery, and orthopedics) for select locations in Central Texas communities. Competitive physician assistance packages available for private practice opportunities. Call Johnny Burns, Senior Vice President, HealthStar Corporation, 3S55 Timmons, Suite 700, Houston, Texas 77027; 1-B00-627-214S or 713 627-2145.

Cardiologist—Invasive/non-invasive BC/BE to join two BC cardiologists located in southwest Houston. Good salary, fringe benefits, partnership after two years. Send CV to P. McKenzie, 1919 Land Mark, Richmond, Texas 77469.

Psychiatrist—Small, progressive hospital outside Dallas/Fort Worth to assist/develop a strong practice dealing with a variety of psychiatric modalities, affiliated with their 1S-bed Mental Wellness Unit. Board eligible/certified psychiatrist considered. Income guarantee, relocation, call/coverage, new facilities, pleasant lifestyle are included. Contact Mary Wynkoop, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 30350; call 404 641-6411.

OPPORTUNITIES SOUGHT

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 7B701. 512 477-6704, ext. 263.

53-y/o American-born and trained FP with stable background in private practice and industrial medicine, seeks solid practice opportunity. Open to setting. No OB or surgery. Prefer small town near metropolitan area (family in Houston). Please reply to Ad-6B0, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-S826 or 313 477-68B0.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than S0% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 1B164, Dallas, Texas 7521B; 214 369-3960; Metro 229-9253.

Discount Holter Scanning Services starting at $35. Spacelabs Holter recorder (cassette) available from $127S; Cardionostic Holter recorder (cassette available) from $995. Smallest, slightest Holters update. Fast service (24-48 hrs.) turnover. Hookup kits starting at $4.9S. Special introductory offer of three free tests with any purchase or lease of recorder. Cardiologist overread available for $1S. If interested call 1-B00-24B-0153.

Wanted—Used mammographic, ultrasound or x-ray equipment. Call Dr. Vancura, B17 774-9994; 2027 S. 61st, Suite 116, Temple, Texas 76501.

Doctor, you can't beat the quality or the price! Holter Monitor Scanning Service. Physician owned, trained, and supervised. Now using UP Service for faster turnaround time. No contracts to sign. We can arrange for lease/purchase of Holter equipment. Now is the time to own your own recorder for as little as $49 a month. Call DCG Interpretation 313 B79-8B60.

Office Space/Property

Ambulatory Care Center for Sale—San Antonio, Texas. Well established ambulatory care facility with lab and x-ray on S.W. Military Hwy. Gross income $450,000/yr. If interested write to San Antonio Family Care Centers, 12B11 Castle George, San Antonio, Texas 7B230.

San Antonio—Space available for sublease in South Park Mall adjoining established dental office. For further information contact Dr. Jack Tucker, S12 927-1111.

Gentlemen's Ranch—73 rolling acres, 85 miles east of Dallas, just off I-20. Two creeks, two large ponds, 90 percent in grasses and a quality ranch style home. $295,000. Richard Howell, Broker, P.O. Box 775, Lindale, Texas 75771; evenings 214 BB2-4919.

Practices

Jackson and Coker has 40 practices for sale in 25 states. Specialties include: FP, IM, ORS, OBG, OPH, PD, N, GS, and U. I'm sure one of them is just the practice you have been looking for. Call today for more information. Bob Kinberger, 404 393-1210.

Practice For Sale—Bryan. Doctor retiring for health reasons. Well established family practice. Excellent for internal medicine or family practitioner. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker. 214 327-7765.

Internist (MD)—Excellent opportunity to purchase a fully equipped office (building, equipment, and practice) in Central Texas. Facility can accommodate three to six doctors. Two minutes from new 109-bed hospital. Terms possible. Call Clarence Miller, 512 3S3-112S, leave word.

Dallas, Gynecology—Rewarding gynecological practice, Baylor Hospital area, offered by retiring physician. Board eligible or certified candidates only. Unusual benefits; attractive option to own office space in joint venture medical building. Please reply to Ad-651, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Practice for sale by the only neurologist. City of 75,000. Young medical community. Two board neurosurgeons; CT and MR. Unlimited clinical, EMG, and EEG opportunity. Inquiries to 804 Medical Circle Drive, Longview, Texas 7S601; phone number 214 75B-8466.

For Sale—Active family practice in prestigious north Houston suburb. Grossed $200K+ last year operating three days a week. Opportunity to substantially increase volume with a partnership or a five day week. Contact Lisa Greene, 14811 St. Mary's Lane, Suite 270, Houston, Texas 77079 or call 713 55B-2566.

Walk-in clinic, college community in Central Texas. Population 110,000 with 2S0,000 trade area. Large industrial and commercial accounts as well as municipal and county. Good specialty coverage, two hospitals with ERs. Owner wants to sell due to age. Please reply to Ad-677, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $S0,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-B00-241-690S. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 75OB0. Contact Dan Lewis at 214 437-11B0 office or 214 23B-7129 evenings.

For residents, start-up practitioners, and established physicians—Unsecured signature loans $5,000-$60,000. No points or fees. Competitive rates, level payments. Up to six years to repay. Deferred principal option. No prepayment penalties. For information and application, call Austin 512 836-9126, MediFinancial, Harper, or 1-B00-331-4952, Medi-Versal, Dept. 114.

CONTINUING EDUCATION

1988 CME Cruise/Conferences on medicolegal issues and risk management—Caribbean, Mexico, Alaska, China/Orient, Europe, New England/Canada, Trans Panama Canal, South Pacific. Approved for 24-2B CME Cat. I credits (AMA/PRA) and AAFP prescribed credits. Distinguished lecturers. Excellent group rates on finest ships. Registration limited. Pre-scheduled in compliance with IRS requirements. Information: International Conferences, 1B9 Lodge Avenue, Huntington Station, New York 11746; S16 549-0869.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

Flex-National Board Preparation—November 1987 intensive one week review course in Norfolk, Virginia by professors, MDs and PhDs, medical authors. Prepare yourself thoroughly and professionally in the basic sciences and clinical disciplines. This is a highly structured refresher course. Study notes provided. USNBE Review Center, P.O. Box 767, Friendswood, Texas 77546; 713 482-8597.

DOCTOR, DO YOU HAVE A DIET TO LOSE WEIGHT?

CALORIES, LTD.
Menu Planning System
Individualized Menu Planning Program for PC's

Tina Fulton, R.D., L.D.
1901 Medi Park, Suite 1037
Amarillo, Texas 79106
806-358-4498

Advertising Directory

Air Force	16
American Physicians Insurance Exchange	53
American Physicians Life Insurance	15
Ayerst Laboratories	17–20, 78–80
BMW Center	82
Bell Atlantic TriCon Leasing	12
Campbell Laboratories, Inc.	88
Diagnostic Clinic of Houston	3rd Cover
Family Practice Recertification	58
GE Information Services	14, 15
I. C. System, Inc.	54
Insurance Corporation of America	29
Knoll Pharmaceutical	21, 22
Eli Lilly & Company	60
The Medical Protective Company	81
MEDS	4
Nynex Business Centers	45
Roche Laboratories	1, 2, 39–42, 49, 50
Scott and White Clinic	Back Cover
Michael R. Sharp, Attorney	2nd Cover
Smith Kline & French Laboratories	77
Spring Shadows Glen	2nd Cover
Starlight Village Hospital	75
Texas Medical Association	
Advocacy '87/Speaking Out on the Issues/Cassette Tapes	76
Memorial Library	63
Texas Medical Association Insurance Program	9
Texas Medical Liability Trust	38
Timberlawn Psychiatric Hospital	Back Cover
The Upjohn Company	59

Texas Physicians' Directory	65–71
Classified Advertising	72–74

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas

SAN ANTONIO
MAY 12-15
1988

Texas Medical Association
121st Annual Session

Order Cassette Tapes Today!

Texas Medical Association 1987 Fall Conference

Tape 1
Advocacy and the Issues—
David Vanderpool, MD
Speaking Out on the Issues—
James E. Davis, MD
A Good Gurkha Is Hard To Find—
Terry Townsend

Tape 2
Panel: Speaking Out for the Patient—
Nancy Dickey, MD
Harold Skaggs, MD
Lynn E. Jensen, PhD
Peter A. French, PhD

Tape 3
Philip R. Overton Annual Lectureship in Medicine and the Law

PPO, HMO, and Insurance Restrictions on Patient Treatment Choices: The Physician's Role—
Terry O. Tottenham, JD, LLM
Speaking Out on Ethics—
Peter A. French, PhD
Speaking Out on AIDS
Robert Bernstein, MD

Tape 4
Panel: Speaking Out to the Texas Legislature—
William G. Gamel, MD
Senator Chet Brooks
Senator John T. Montford
Representative Brad Wright
Representative Mike McKinney

Tape 5
Panel: Advocating for the Economic Health of Your Practice—
Jim Bob Brame, MD
Jerry D. Sconce
Paul Ginzburg, PhD
Eugene S. Ogrod, II, MD

Special Pre-Conference/ Post-Conference Worksho

Friday, September 25— More on Marketing Tips fo Successful Practice
Jeffrey J. Denning, Conomikes Associates, In

Sunday, September 27— Keeping Ahead of the MA
Rogers K. Coleman, MD, B Cross and Blue Shield of Texas, Inc.
Harold Whittington, Haro Whittington & Associates

Special price for each two- tape set $14.95, plus 7¼% state sales tax!

1987 Fall Conference Tape Order Form

Each audio cassette tape is $7.95, plus 7¼% state sales tax.

☐ **Tape 1** ☐ **Tape 2** ☐ **Tape 3** ☐ **Tape 4** ☐ **Tape 5**

_____ **Marketing Workshop (2-tape set, $14.95 plus 7¼%)**

_____ **MAAC Workshop (2-tape set, $14.95 plus 7¼%)**

Total cost _____ _____ **check** _____ **mail**
_____ **cash** _____ **deliver**
_____ **bill**

Name _____

Address _____

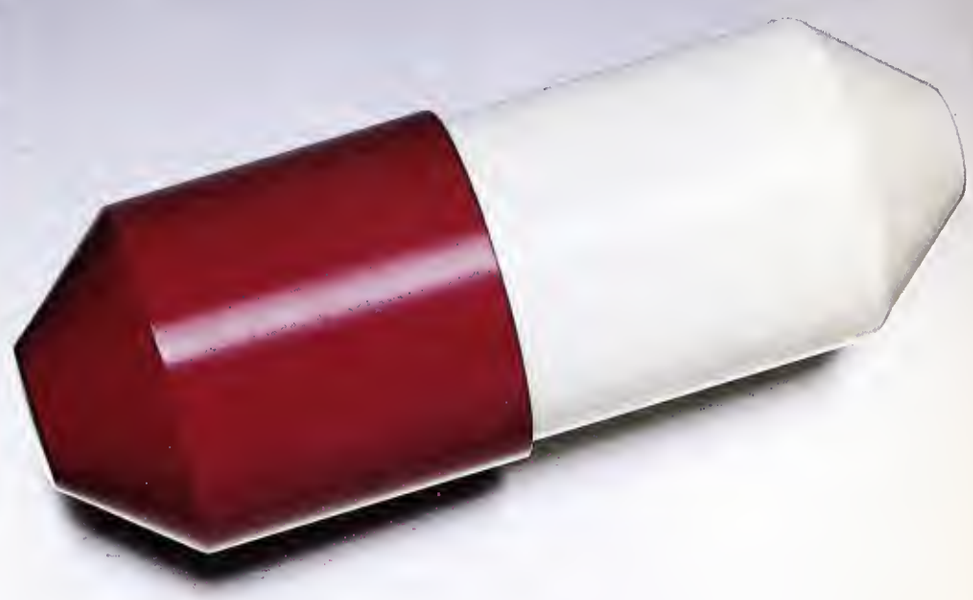
City _____ **Zip** _____

For additional information, contact TMA Communication Department, 1801 North Lamar Blvd., Austin, Texas 78701; 512/477-6704, ext. 212.

In Hypertension*... When You Need to Conserve K^+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).



Potassium-Sparing

DYAZIDE®

25 mg Hydrochlorothiazide/**50 mg** Triamterene/SKF

Over 20 Years of Confidence

The unique red and white Dyazide® capsule: Your assurance of SK&F quality.

a product of

SK&F CO.

Carolina, P.R. 00630

©SK&F Co., 1983

Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

3RS-DZ:L42

There's never been a better time for her

nd PREMARIN®

Proven benefits beyond relief of vasomotor symptoms

No other estrogen proven effective for osteoporosis

Only conjugated estrogens tablets have established efficacy in both osteoporosis[1] and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.
And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.[2]

PREMARIN®
(conjugated estrogens tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

PREMARIN®
(conjugated estrogens tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(conjugated estrogens)

Vaginal Cream

0.625 mg/g

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA
Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year This risk was independent of the other known risk factors for endometrial cancer These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4 5 to 13 9 times greater than in nonusers The risk appears to depend on both duration of treatment and on estrogen dose In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration, it therefore appears prudent to utilize such a regimen Close clinical surveillance of all women taking estrogens is important In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding adequate diagnostic measures should be undertaken to rule out malignancy There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses
2 ESTROGENS SHOULD NOT BE USED DURING PREGNANCY
The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare This risk has been estimated as not greater than 4 per 1,000 exposures Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix Although these changes are histologically benign, it is not known whether they are precursors of malignancy Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects One case-controlled study estimated a 4 7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion) Some of these exposures were very short and involved only a few days of treatment The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000 In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters Tablets are available in 0 3 mg, 0 625 mg, 0 9 mg, 1 25 mg, and 2 5 mg strengths of conjugated estrogens Cream is available as 0 625 mg conjugated estrogens per gram

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP) Moderate-to-severe *vasomotor* symptoms associated with the menopause (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions) Osteoporosis (abnormally low bone mass) Atrophic vaginitis Kraurosis vulvae Female castration

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING)

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes Whether this will provide protection from endometrial carcinoma has not been clearly established There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens (See PRECAUTIONS.) The choice of progestin and dosage may be important, product labeling should be reviewed to minimize possible adverse effects

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1 Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2 Known or suspected estrogen-dependent neoplasia 3 Known or suspected pregnancy (see Boxed Warning) 4 Undiagnosed abnormal genital bleeding 5 Active thrombophlebitis or thromboembolic disorders. 6 A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy)

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning) However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement, it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke and myocardial infarction Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use They should be used with caution in patients with cerebral vascular or coronary artery disease Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nontatal myocardial infarction, pulmonary embolism, and thrombophlebitis When doses of this size are used, any of the thromboembolic and thrombolic adverse effects should be considered a clear risk

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives For this reason, diabetic patients should be carefully observed Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients Oral contraceptives appear to be associated with an increased incidence of mental depression Patients with a history of depression should be carefully observed Pre-existing uterine leiomyomata may increase in size during estrogen use The pathologist should be advised of estrogen therapy when relevant specimens are submitted If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen.

a Increased sulfobromophthalein retention.

b Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability

c Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay Free T_3 resin uptake is decreased, reflecting the elevated TBG, free T_4 concentration is unaltered

d Impaired glucose tolerance

e Decreased pregnanediol excretion

f Reduced response to metyrapone test

g Reduced serum folate concentration

h Increased serum triglyceride and phospholipid concentration

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyomata, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice, chloasma or melasma which may persist when drug is discontinued, erythema multiforme, erythema nodosum, hemorrhagic eruption, loss of scalp hair, hirsutism, steepening of corneal curvature, intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1 *Given cyclically for short-term use only* For treatment of moderate-to-severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0 3 mg to 1 25 mg or more daily) The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off) Attempts to discontinue or taper medication should be made at three- to six-month intervals

2 *Given cyclically* Osteoporosis Female castration Osteoporosis —0 625 mg daily Administration should be cyclic (eg, three weeks on and one week off) Female castration—1 25 mg daily, cyclically Adjust upward or downward according to response of the patient For maintenance, adjust dosage to lowest level that will provide effective control

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only For treatment of atrophic vaginitis or kraurosis vulvae

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible

Administration should be cyclic (eg, three weeks on and one week off)

Attempts to discontinue or taper medication should be made at three- to six-month intervals

Usual dosage range 2 g to 4 g daily, intravaginally, depending on the severity of the condition

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding

References:

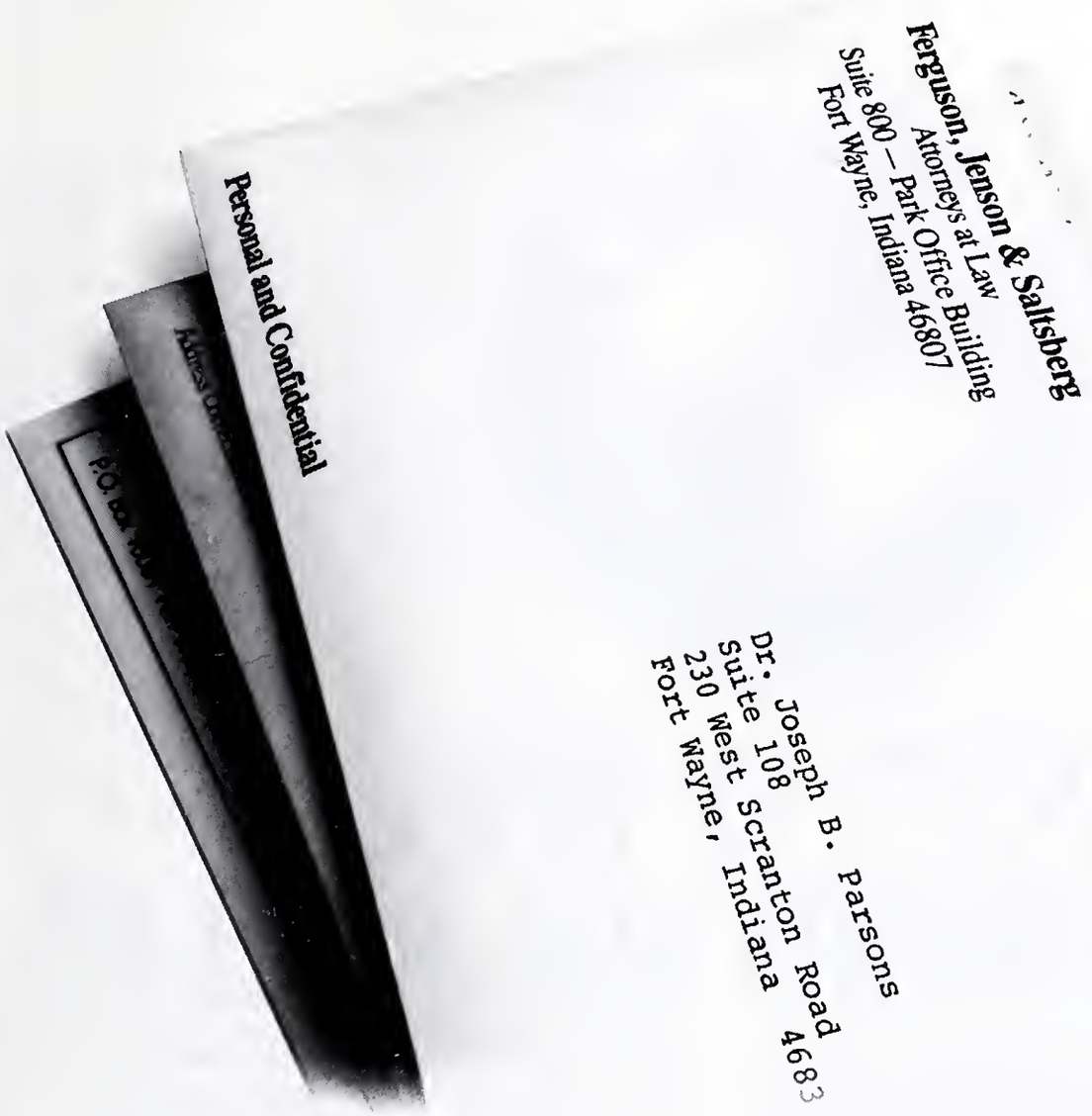
1. Lindsay R, Hart OM, Clark OM The minimum effective dose of estrogen for prevention of postmenopausal bone loss *Obstet Gynecol* 1984,63 759-763 **2.** Studd JWW, Thom MH, Paterson MEL, et al: The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Paoletto N, Paoletti R, Ambrus JL (eds) *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13

© 1987 Ayerst Laboratories
All rights reserved

6437/5B7

Ayerst® AYERST LABORATORIES
New York, NY 10017

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

81

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

JUST ARRIVED:

1987 325 Convertible

The first BMW Convertible offered in over three decades. Its 168-h.p. engine has 39% more power than 1986 3-series.

JUST ARRIVED:

1987 7-Series

An entirely new luxury sedan for 1987. From its aerodynamic exterior to its hand-sewn leather interior, this car's impact will be measured in decades, not years.

JUST ARRIVED:

1987 M-Series

The three new M-Series BMW's represent the two fastest production sedans available in the U.S., (M3 and M5), and a limited edition sports coupe (M6) with such features as a hand built 256-h.p. engine and hand tuned suspension.

Over 150 new BMW's to choose from. All with ABS brakes and 3 year/36,000 mile warranty.

The New B M W

BMW CENTER

FACTORY AUTHORIZED.

4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

COURSES

NOVEMBER

Emergency Care

Nov 12–14, 1987
7TH ANNUAL WILLIAM BEAUMONT ARMY MEDICAL CENTER TRAUMA SYMPOSIUM: CONTROVERSIES IN HEAD AND NECK TRAUMA. El Paso Airport Hilton Hotel, El Paso, Tex. Fee $80 physicians, $30 residents. Category 1, AMA Physician's Recognition Award; 23 hours. Contact Marty May, DAC, Trauma Secretary, WBAMC, El Paso, TX 79920-5001 (915) 569-2621 or (915) 569-2787

Endocrinology

Nov 12–14, 1987
DIABETES UPDATE 1987. San Luis Hotel, Galveston, Tex. Fee $200 before Oct 20, $225 after Oct 20. Category 1, AMA Physician's Recognition Award; 13 hours. AAFP prescribed. Contact Martha Berlin, Program Coordinator, Office of Continuing Education, The University of Texas Medical Branch, 3rd Floor Learning Center, Route J-34, Galveston, TX 77550-2782, (409) 761-2934

Gastroenterology

Nov 14, 1987
GASTROINTESTINAL ENDOSCOPY: PERSPECTIVES AND REFLECTIONS. Lincoln Hotel Post Oak, Houston. Fee $150. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Lila Lerner or Vicki Forgac, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

Nov 5–7, 1987
HISPANIC HEALTH STATUS SYMPOSIUM. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact Juan Flores, Center for Health Policy Development, Inc, 2300 W Commerce St, Suite 304, San Antonio, TX 78207

Nov 8, 1987
FLEXIBLE SIGMOIDOSCOPY WORKSHOP. San Antonio. Fee $125. Category 1, AMA Physician's Recognition Award; 5 hours. AAFP prescribed. Contact Marie Epps, Office of Extramural Programs, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, #223, Houston, TX 77030 (713) 792-2200

Internal Medicine

Nov 20–21, 1987
UPDATE IN SEXUALLY TRANSMITTED DISEASES. The University of Texas Health Science Center, Dallas. Fee $75. Category 1, AMA Physician's Recognition Award; 13 hours. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Obstetrics and Gynecology

Nov 3–7, 1987
CONTEMPORARY ISSUES AND PRACTICES IN OB/GYN. Lincoln Hotel, Dallas. Fee $475 complete course, $325 basic course, $150 pathology course. Category 1, AMA Physician's Recognition Award; 36 hours. Contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Nov 4–6, 1987
UPDATE IN PELVIC AND VAGINAL SURGERY. Four Seasons Hotel, San Antonio, Tex. Fee $250. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Nov 13, 1987
PREVENTION OF PRETERM DELIVERY/LOW BIRTH WEIGHT: STATE OF THE ART. Wyndham Southpark Hotel, Austin, Tex. Fee $25. Credit TBA. Contact Donna Wysocki, 1018 W 11th St, Austin, TX 78703 (512) 474-6981

Nov 13–14, 1987
OFFICE GYNECOLOGY AND FOOTBALL WEEKEND. Texas A&M College of Medicine, College Station, Tex. Fee $125. Category 1, AMA Physician's Recognition Award; 8 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 S 31st St, Temple, TX 76508 (817) 774-4083

Oncology

Nov 8–11, 1987
GENETIC MECHANISMS AND CANCER/40TH ANNUAL SYMPOSIUM ON FUNDAMENTAL CANCER RESEARCH. Westin Galleria Hotel, Houston. Fee $300 before Oct 21, $350 after Oct 21. Credit TBA. Contact Office of Conference Services, M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

Nov 11–14, 1987
RECENT ADVANCES IN THE SYSTEMIC THERAPY OF GENITOURINARY MALIGNANCIES/31ST ANNUAL CLINICAL CONFERENCE. Westin Galleria Hotel, Houston. Fee $300 before Oct 21, $350 on-site registration, $250 M.D. Anderson associates member. Category 1, AMA Physician's Recognition Award; 22 hours. Contact Joan Baird, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-3030

Orthopedic Surgery

Nov 13–14, 1987
ORTHOPAEDIC SURGERY UPDATE/SURGICAL TECHNIQUES AND TREATMENT. Doubletree Hotel, Dallas. Fee $225, $75 residents and fellows. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Lela Breckenridge, Office of Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Lane, Dallas, TX 75231 (214) 696-8458

Nov 13–14, 1987
THE DISTAL RADIOULNAR JOINT: PROBLEMS AND PROCEDURES. Hotel Royal Plaza, Orlando, Fla. Fee $425 before Oct 16, $475 after Oct 16. Category 1, AMA Physician's Recognition Award; 12.25 hours. Contact the American Society for Surgery of the Hand, 3025 South Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Pediatrics

Nov 13–14, 1987
PEDIATRICS FOR THE PRACTITIONER: 21ST ANNUAL KENNETH C. HALTALIN PEDIATRICS SEMINAR. Lincoln Hotel, Dallas. Fee $100.

Category 1, AMA Physician's Recognition Award; 11 hours. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Psychiatry

Nov 21, 1987
UPDATE IN PSYCHIATRY: ANXIETY DISORDERS FROM FREUD TO PHYSIOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Nov 4–25, 1987
JUNGIAN PSYCHOLOGY II, III. Room D1.200, The University of Texas Health Science Center, Dallas. Fee $150 for each 1 month series. Category 1, AMA Physician's Recognition Award; 10 hours each series. Contact Freddie Heitman, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Radiology

Nov 4–7, 1987
7TH FUNDAMENTALS OF MRI. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Surgery

Nov 4–7, 1987
2ND INTERNATIONAL CONGRESS ON CYCLOSPORINE. Sheraton Washington, Washington, DC. Fee $300 professionals, $150 paraprofessionals and others. Credit TBA, 26 hours. Contact Alice Reardon, Continuing Education Division, G.104 MSB, The University of Texas Medical School, 6431 Fannin, Houston, TX 77030 (713) 792-5346

DECEMBER

Chest Disease

Dec 11–12, 1987
PULMONARY INFECTIONS IN HOSPITALIZED PATIENTS. New Orleans Hilton Riverside and Towers, New Orleans. Fee $165 members of American College of Chest Physicians, $225 nonmembers. Category 1, AMA Physician's Recognition Award; 10 hours. Contact ACCP, PO Box 93826, Chicago, IL 60673 (312) 698-2200

Computer Applications

Dec 7–8 and Dec 10–11, 1987
COMPUTER APPLICATIONS: AN INTRODUCTORY WORKSHOP. Houstonian Hotel and Conference Center, Houston. Fee TBA. Credit TBA. Contact Robin Murray, The American College of Obstetricians and Gynecologists, 600 Maryland Ave, SW, Washington, DC, 20024-2588 (202) 638-5577, ext 343

Emergency Care

Dec 6–12, 1987
EMERGENCIES IN INTERNAL MEDICINE. Frenchman's Reef Resort, St Thomas, Virgin Islands. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Endocrinology

Dec 4–5, 1987
DIABETES WEEKEND. Westin Hotel, Dallas. Fee TBA. Credit TBA. Contact Lela Breckenridge, Office of Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Lane, Dallas, TX 75231 (214) 696-8458

Family Medicine

Dec 4–5, 1987
UPDATE OF MEDICAL AND SURGICAL MANAGEMENT OF GASTROINTESTINAL DISORDERS. Hyatt Regency Hotel, San Antonio, Tex. Fee $125, no charge for physicians in training with letter from program director. Category 1, AMA Physician's Recognition Award; 9 hours. Contact Kathleen O'Shea, Humana Hospital, 8026 Floyd Curl Dr, San Antonio, TX 78229 (512) 692-3545

Dec 11–12, 1987
2ND ANNUAL PRIMARY CARE RESEARCH METHODS AND STATISTICS. Gunter Hotel, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Infectious Diseases

Dec 5–6, 1987
2ND ANNUAL INFECTIOUS DISEASES SYMPOSIUM. Providence Memorial Hospital, El Paso, Tex. Fee $150 physicians, $75 residents, interns, students. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Karen DeLong, Providence Memorial Hospital, 2001 N Oregon St, El Paso, TX 79902 (915) 542-6001

Ophthalmology

Dec 3–5, 1987
CONTACT LENS TECHNOLOGY. Stouffer's Greenway Plaza Hotel, Houston. Fee $275. Credit TBA. Contact Bette Burkett, Contact Lens Technology Course, Cullen Eye Institute, Baylor College of Medicine, 6501 Fannin, Houston, TX 77030 (713) 799-5942

Pathology

Dec 12, 1987
44TH ANNUAL PATHOLOGY SEMINAR: PROBLEMS IN LIVER PATHOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

Dec 3–6, 1987
INNOVATIVE AND CONTROVERSIAL STRATEGIES IN REHABILITATION. Sheraton Bal Harbour, Miami. Fee TBA. Credit TBA. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Plastic Surgery

Dec 4–5, 1987
CONTEMPORARY CONCEPTS IN FACIAL SURGERY. Waldorf Astoria, New York. Fee $675, $350 residents. Category 1, AMA Physician's Recognition Award; 11 hours. Contact Francine Leinhardt, Course Coordinator, Manhattan Eye, Ear and Throat Hospital, 210 E 64th St, New York, NY 10021 (212) 838-9200 ext 2776

Radiology

Dec 7–11, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Baylor Center for Imaging Research, The Woodlands, Tex. Fee $1,000 physicians, $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Risk Management

Dec 18, 1987
A CASE STUDY APPROACH TO RISK MANAGEMENT AND MALPRACTICE. Sheraton Bal Harbour, Miami. Fee $175. Category 1, AMA Physician's Recognition Award; 6 hours. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Surgery

Dec 3–4, 1987

SURGICAL HEALTH POLICY AND FINANCE. The Waldorf Astoria, New York. Fee $400, $200 residents. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

JANUARY

Cardiovascular Disease

Jan 12–17, 1988
FRONTIERS OF CARDIOLOGY 1988. Arapahoe Lodge, Winter Park, Colo. Fee $50. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Earl Beard, MD, Section of Cardiology, Kelsey-Seyhold Clinic, 6624 Fannin, Houston, TX 77030 (713) 797-1551

Orthopedic Surgery

Jan 16, 1988
DIABETIC FOOT CONFERENCE. Location TBA. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Otolaryngology

Jan 31–Feb 5, 1988
SURGICAL ANATOMY AND TECHNIQUES OF THE TEMPORAL BONE. Validmar Jordan Laboratory, Dallas. Fee $675, $475 residents. Category 1, AMA Physician's Recognition Award; 46 hours. Contact Ann Hood, RN, 3600 Gaston Ave, Barnett Tower, #1105, Dallas, TX 75246 (800) 443-1762

Pediatrics

Jan 12–17, 1988
17TH ANNUAL PEDIATRIC POSTGRADUATE COURSE/PEDIATRIC UPDATE 1988. Camino Real, Puerto Vallarta, Mexico. Fee TBA. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Ann Boehme, Schneider Children's Hospital of Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

Radiology

Jan 25–29, 1988
ANATOMY FOR RADIOTHERAPY TREATMENT PLANNING. The University of Texas Health Science Center, San Antonio, Tex. Fee $650. Category 1. AMA Physician's Recognition Award; 36 hours. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Sports Medicine

Jan 21–23, 1988
15TH ANNUAL SPORTS MEDICINE SYMPOSIUM. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Urology

Jan 23–24, 1988
TRANSITIONAL CELL CARCINOMA OF THE URINARY TRACT. Teaching Center Auditorium, Long Island Jewish Medical Center, New Hyde Park, NY. Fee $250, $100 residents. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

FEBRUARY

Anesthesiology

Feb 7–18, 1988
BAY-CAP XI: TACO IV. Hawaii, Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Cardiovascular Disease

Feb 11–13, 1988
2ND ANNUAL UCSD-SHARP MEMORIAL HOSPITAL INTERNATIONAL CARDIAC SYMPOSIUM: CLINICAL STRATEGIES IN COMPLEX VALVULAR HEART DISEASE. San Diego. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Geriatrics

Feb 18–20, 1988
MANAGEMENT OF THE ELDERLY II. Miami. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Feb 27–28, 1988
9TH ANNUAL GERIATRIC MEDICINE: SELECTED TOPICS. San Antonio, Tex. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Neurology

Feb 2–7, 1988
NEUROLOGY UPDATE 1988. Miami. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Oncology

Feb 4–6, 1988
3RD INTERNATIONAL CONFERENCE ON MONOCLONAL ANTIBODY IMMUNOCONJUGATES FOR CANCER. San Diego. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, California 92093 (619) 534-3940

Feb 25–27, 1988
2ND INTERNATIONAL CONFERENCE ON INTRACAVITARY CHEMOTHERAPY. San Diego. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Pathology

Feb 11–14, 1988
6TH ANNUAL CYTOPATHOLOGY REVIEW COURSE. Houston. Contact Tamara Greiner, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030

Plastic Surgery

Feb 26–28, 1988
BASIC RHINOPLASTY. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Urology

Feb 11–13, 1988
CALCULI UPDATE 1988. Acapulco, Mexico. Contact Alice Henderson, American Urological Association, 6750 West Loop South, Ste 900, Bellaire, TX 77401 (713) 665-7500

MARCH

Allergy

March 2–6, 1988
1988 PAN AMERICAN ALLERGY SOCIETY TRAINING COURSE AND SEMINAR. San Antonio, Tex. Contact Betty Kahler, PAAS, 229 Parking Way, Lake Jackson, TX 77566 (409) 297-5635 or (409) 297-4069

Cardiovascular Disease

March 27–30, 1988
PRACTICAL ASPECTS OF CARDIOVASCULAR DISEASE AND RENAL

DRUGS. Walt Disney World, Fla. Contact Division of Continuing Medical Education D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Family Medicine

March 17–20, 1988
13TH ANNUAL FAMILY PRACTICE RECERTIFICATION REVIEW. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Geriatrics

March 13–16, 1988
GERIATRIC MEDICINE RECERTIFICATION REVIEW. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

March 19–26, 1988
THE BRITISH EXPERIENCE: A STUDY TOUR IN ENGLAND ON PUBLIC AND PRIVATE CARE INNOVATIONS FOR THE AGED. England. Contact Pat Ashton, Holbrook Travel, 3540 N.W. 13th St, Gainesville, Fla 32609 (800) 451-7111

Obstetrics and Gynecology

March 25–26, 1988
CURRENT CONCEPTS IN OBSTETRICS AND GYNECOLOGY. Location TBA. Contact Vicki Forgac, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030

Ophthalmology

March 18–20, 1988
CLINICAL ADVANCES IN OPHTHALMOLOGY FOR THE PRACTICING OPHTHALMOLOGIST/THE CULLEN COURSE 1988. Houston. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Otolaryngology

March 10–12, 1988
CURRENT CLINICAL CONCEPTS IN OTOLARYNGOLOGY. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Pathology

March 7–11, 1988
CURRENT CONCEPTS IN TOXICOLOGY. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation
March 21–31, 1988
22ND COMPREHENSIVE REVIEW COURSE IN PHYSICAL MEDICINE AND REHABILITATION. Houston. Contact Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

APRIL

Orthopedic Surgery

April 13–17, 1988
INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Pediatrics

April 6–9, 1988
SYMPOSIUM ON RESPIRATORY TRACT INFECTION IN CHILDREN/8TH ANNUAL NATIONAL PEDIATRIC INFECTIOUS DISEASE SEMINAR. New Orleans. Contact Dept of Pediatrics, Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3439 or (214) 688-2166

April 15–16, 1988
PEDIATRIC POSTGRADUATE SYMPOSIUM/1988. Houston. Contact Lila Lerner or Vicki Forgac, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

April 5–9, 1988
CURRENT TOPICS IN GENERAL SURGERY. Kona, Hawaii. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blv, Dallas, TX 75235 (214) 688-2166

REGULARLY SCHEDULED ACTIVITIES

Monday–Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday–Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday–Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

EF TELEPLAST TELECONFERENCE

Dec 5, 1987, Saturday, 10 am to 12 pm
SECONDARY RHINOPLASTY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

OCTOBER

GEARING UP FOR RETIREMENT—4 hours
Oct 23–25, 1987, Inn on the Park, Houston

HOW TO IMPROVE YOUR THIRD-PARTY REIMBURSEMENT—2 hours
Oct 13, 1987, Hillcrest Baptist Medical Center, Waco
Oct 14, 1987, Green Oaks Inn and Conference Center, Fort Worth
Oct 16, 1987, Marriott Hotel-Astrodome, Houston

INCREASING YOUR NET WORTH THROUGH FINANCIAL, PENSION, AND INVESTMENT PLANNING
Oct 10, 1987, Hilton Palacio del Rio, San Antonio

INSURANCE CLAIMS PREPARATION, CODING AND DOCUMENTATION—4 hours
Oct 13, 1987, Hillcrest Baptist Medical Center, Waco
Oct 14, 1987, Green Oaks Inn and Conference Center, Fort Worth
Oct 16, 1987, Marriott Hotel-Astrodome, Houston

NOVEMBER

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Nov 11–12, 1987, St Paul Medical Center, Dallas
Nov 13–14, 1987, Texas Tech Regional Academic Health Center, El Paso
Nov 18–19, 1987, Marriott Hotel-Astrodome, Houston
Nov 20–21, 1987, Texas Tech University Health Sciences Center, Lubbock

HOW TO RUN A MORE PROFITABLE PRACTICE
Nov 4, 1987, Sheraton Amarillo Hotel and Towers, Amarillo
Nov 5, 1987, The Summit Hotel, Dallas

PERSONAL INCOME AND ESTATE TAX PLANNING
Nov 7–8, 1987, Dallas Marriott Quorum, Dallas

DECEMBER

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Dec 2–3, 1987, Tarrant County Medical Society Headquarters, Fort Worth
Dec 4–5, 1987, Holiday Inn, Temple
Dec 8–9, Marriott Hotel-Astrodome, Houston
Dec 10–11, 1987, The University of Texas Health Science Center Medical School, San Antonio

CALENDAR OF MEETINGS ■Denotes Texas Meetings

OCTOBER

12TH ANNUAL INTERNATIONAL BODY IMAGING CONFERENCE, Maui, Hawaii, Oct 10–18, 1987. Contact Annual Body Imaging Conference, Dept of Radiology, Nu Med Regional Medical Center, 22141 Roscoe Blvd, Canoga Park, CA 91304 (818) 340-0580, ext 280

AMA NATIONAL CONFERENCE ON THE IMPAIRED HEALTH PROFESSIONAL, Chicago, Oct 8–11, 1987. Contact Janice Robertson, AMA Dept of Substance Abuse, 535 N Dearborn St, Chicago, IL 60610 (321) 645-5083

AMERICAN COLLEGE OF CHEST PHYSICIANS 53RD ANNUAL SCIENTIFIC ASSEMBLY, Atlanta, Oct 26–30, 1987. ACCP, Division of Education, 911 Busse Hwy, Park Ridge, IL 60068-2375 (312) 698-2200

■AMERICAN COLLEGE OF GASTROENTEROLOGY ANNUAL MEETING AND POSTGRADUATE COURSE, Dallas, Oct 24–28, 1987. Contact Gardner McCormick, ACG, 13 Elm St, Manchester, MA 01944 (617) 927-8330

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION/AMERICAN CONGRESS OF REHABILITATION MEDICINE JOINT ANNUAL MEETING, Orlando, Fla, Oct 18–23, 1987. Contact Conie Van Brunt McMillan, Director of Marketing Communications, ACRM/AAPM&R, 122 S Michigan Ave, Suite 1300, Chicago, IL 60603-6107 (312) 922-9366

AMERICAN DENTAL ASSOCIATION ANNUAL MEETING, Las Vegas, Oct 10–13, 1987. Contact Edward Jeske, ADA, 211 E Chicago Ave, Chicago, IL 60611 (312) 440-2657

AMERICAN DIETETIC ASSOCIATION 70TH ANNUAL MEETING, Atlanta, Oct 19–23, 1987. Barbara Mueller, Dept of Meetings, 430 N Michigan Ave, Chicago, IL 60611 (312) 280-5031

AMERICAN PSYCHIATRIC ASSOCIATION INSTITUTE ON HOSPITAL AND COMMUNITY PSYCHIATRY ANNUAL MEETING, Boston, Oct 25–29, 1987. Kathleen Bryan, Director, Meetings Management, 1400 K St, NW, Suite 503, Washington, DC 20005 (202) 682-6100

AMERICAN SOCIETY OF ANESTHESIOLOGISTS ANNUAL MEETING, Atlanta, Oct 10–14, 1987. Contact William Marinko, ASA, 515 Busse Hwy, Park Ridge, IL 60068 (312) 825-5586

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Cincinnati, Ohio, Oct 25–27, 1987. Contact AAMI, 1901 N Fort Myer Dr, Suite 602, Arlington, VA 22209-1699 (800) 332-2264

INTERNATIONAL FEDERATION OF PSYCHOANALYTIC SOCIETIES 5TH SCIENTIFIC CONFERENCE, New York, Oct 9–12, 1987. Contact

Ann Turkel, MD, 350 Central Park West, New York, NY 10025 (212) 831-3400

SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS 38TH ANNUAL WORKSHOPS AND SCIENTIFIC MEETING, Los Angeles, Oct 26–31, 1987. Contact Marion Kenn, Director of SCEH, PO Box 2427, Liverpool, NY 13089-2427 (315) 652-7299

WESTERN SOCIETY OF ALLERGY AND IMMUNOLOGY 26TH ANNUAL SCIENTIFIC SESSION, Lake Tahoe, Nev, Oct 15–17, 1987. Contact Joyce Gullixson, WSAI, 1700 SW Columbia, Portland, OR 97201 (503) 224-6159

NOVEMBER

11TH NATIONAL CONFERENCE ON CORRECTIONAL HEALTH CARE, Chicago, Nov 5–7, 1987. Contact Jodie Manes, National Commission on Correctional Health Care, 2000 N Racine, Suite 3500, Chicago, IL 60614 (312) 528-0818

21ST ANNUAL AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY CONGRESS AND SCIENTIFIC MEETING, Palm Desert, Calif, Nov 30–Dec 3, 1987. Contact Howard Silber, AACIA, PO Box 912-DTS, Omaha, NE 68101 (402) 551-0801

ALL AMERICAS HEALTH '87: INTERNATIONAL CONFERENCE AND EXHIBITION OF MEDICAL AND HOSPITAL EQUIPMENT, Tampa, Fla, Nov 15–18, 1987. Contact Tampa Convention Facilities Department (813) 223-8424

■AMERICAN ACADEMY OF OPHTHALMOLOGY ANNUAL MEETING, Dallas, Nov 8–12, 1987. Contact Bill Jenkinson, AAO, PO Box 7424, San Francisco, CA 94120-7424 (415) 561-8500

AMERICAN SOCIETY OF CYTOLOGY 35TH ANNUAL MEETING, New Orleans, Nov 4–8, 1987. Contact Bernard Naylor, MD, ASC, 1015 Chestnut St, Suite 1518, Philadelphia, PA 19107 (215) 922-3880

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS ANNUAL MEETING, Atlanta, Nov 8–13, 1987. Contact Henry Kawamoto Jr, MD, 2001 Santa Monica Blvd, Santa Monica, CA 90404 (213)829-0391

AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS ANNUAL MEETING, Atlanta, Nov 8–13, 1987. Contact Carol Lazier, ASPRS, 233 N Michigan Ave, Suite 1900, Chicago, IL 60601 (312) 856-1818

ASSOCIATION OF AMERICAN MEDICAL COLLEGES ANNUAL MEETING, Washington, DC, Nov 7–21, 1987. Contact Kathleen Turner, AAMC, 1 Dupont Circle, NW, Ste 200, Washington, DC, 20036 (202) 828-0400

ASSOCIATION OF MILITARY SURGEONS OF THE US 94TH ANNUAL MEETING, Las Vegas, Nov 8–13, 1987. Contact Convention Manager, AMSUS, PO Box 104, Kensington, MD 20895 (301) 933-2801

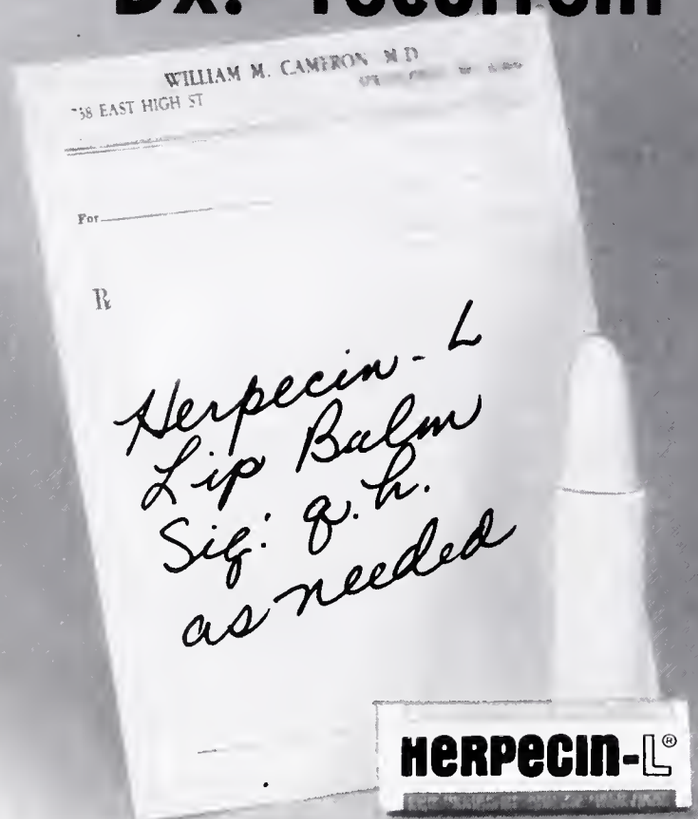
■M.D. ANDERSON HOSPITAL 31ST ANNUAL CLINICAL CONFERENCE/RECENT ADVANCES IN THE SYSTEMIC THERAPY OF GENITOURINARY MALIGNANCIES, Houston, Nov 11–14, 1987. Contact Office of Conference Services, Box 131, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

NATIONAL INSTITUTE ON HEALTH CARE LEADERSHIP AND MANAGEMENT MEETING, Tucson, Nov 17–20, 1987. Contact Sherry Mason, American Academy of Medical Directors, 4830 W Kennedy Blvd, Suite 648, Tampa, FL 33609-2517 (813) 873-2000

■SOUTHERN MEDICAL ASSOCIATION 81ST ANNUAL SCIENTIFIC ASSEMBLY, San Antonio, Nov 1–4, 1987. Contact Linda Willingham, SMA, PO Box 19088, Birmingham, AL 35219-0088

■**TEXAS MEDICAL ASSOCIATION INTERIM SESSION**, Austin, Nov 20–21, 1987. Contact Robert Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

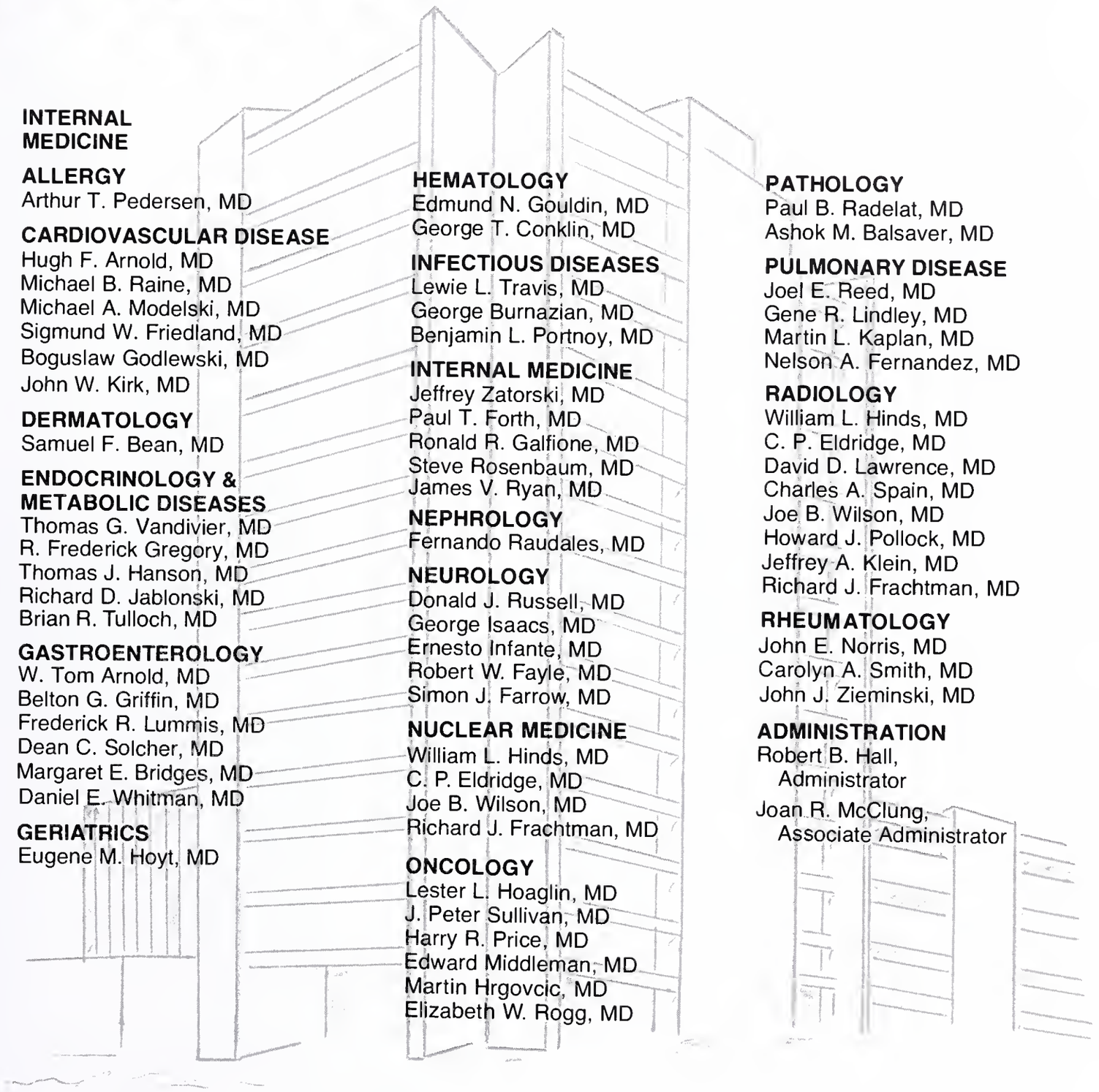
In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH



INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD
John W. Kirk, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Daniel E. Whitman, MD

GERIATRICS
Eugene M. Hoyt, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
James V. Ryan, MD

NEPHROLOGY
Fernando Raudales, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

NUCLEAR MEDICINE
William L. Hinds, MD
C. P. Eldridge, MD
Joe B. Wilson, MD
Richard J. Frachtman, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

SCOTT&WHITE

Texas A&M University
College of Medicine

UPDATE IN PELVIC AND VAGINAL SURGERY

FOUR SEASONS HOTEL
SAN ANTONIO, TEXAS

November 4-6, 1987

Third Annual WOMEN'S HEALTH CARE CONFERENCE

for the Primary Care Physician

and

FOOTBALL WEEKEND

(Texas A&M University vs University of Arkansas)

Texas A&M University
College of Medicine Campus
College Station, Texas
Lecture Hall I

November 13-14, 1987

For more information or to register contact: Office of Continuing Medical Education, (817) 774-4073, Scott and White, Temple, Texas 76508.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223 214/381-7181

NOVEMBER 1987

Texas Medicine

5 Texas statewide cancer registry

27 Changing trends in diagnosis and treatment of RH alloimmunization

44 Winning with medical review

59 Medicine and the law: Drug testing

51 The girls carve a niche in the "old boys' club"

URRENT
REA
1
E
787

Texas Medicine
UCSF LIBRARY
Received on: 11-16-87

SAMPLE

UCSF LIBRARY
SERIALS DEPARTMENT
257 MEDICAL SCIENCES BUILDING
SAN FRANCISCO CA 94143

****

Our team includes you.

At Spring Shadows Glen, we consider the referring professional an integral part of the treatment team. We value your knowledge, skills and expertise, and encourage you to work directly with your patient throughout hospitalization. We coordinate and integrate your work with the care provided by our own experienced and dedicated staff, striving for the best treatment available for your patient. And we refer the patient back to you for follow-up services, upon discharge from Spring Shadows Glen.

Our comprehensive psychiatric hospital offers both inpatient and partial hospitalization programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. For additional information about the hospital, call Spring Shadows Glen.

Spring Shadows Glen

A Comprehensive Psychiatric Hospital

A Division of Memorial City Medical Center

2801 Gessner; Houston, Texas 77080 (713) 462-4000

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:
  - Cardiology
  - Diabetes
  - Pediatrics
  - Ob/Gyn
  - Psychiatry
  - Gastroenterology
- Provides 20 hours of CME Category 1 Credit

FPR

Pain pathways, page 63

Family Practice Recertification®

JULY 1987 / VOL 9 NO 7

CLINICAL ARTICLES

Endometrial Cancer: Causes and Patient Evaluation

Pain Management in Primary Care

Controlling Side Effects of Antipsychotic Drugs, Part 2: Extrapyramidal Symptoms

Osteoporosis, Part 2: Prevention and Treatment

KEEPING CURRENT

Assessing Impairment of Elderly Hospitalized Patients

Routine Radiological Testing for Respiratory Illness

Using Ultrasound to Detect Hip Abnormalities

Diagnosing Bone Infection Under Pressure Sores

Slowing Progression of Diabetic Nephropathy

Behavioral Disorders Among Children of Alcoholic Fathers

Catheter-Related Septic Central Venous Thrombosis

Withdrawing Patients From Antihypertensive Drug Therapy

Cesarean Section and Infant Survival

Preventing Neonatal Group B Streptococcal Disease

Diagnosing Acute Scrotal Pain

Urinary Tract Infections Among Uncircumcised Infants

Colonoscopy: Detecting Recurrent Colorectal Cancer

Surgical Management of Chronic Intestinal Ischemia

Preventing Travelers' Diarrhea

SPECIAL FEATURE

Willingway: A Fellowship in Alcoholism and Drug Addiction

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

In acute and chronic edema due to CHF

FOR PREDICTABLE CONTROL

- **Less potassium loss for a given amount of sodium excretion than with furosemide[1-3]**
- **Predictable dose response[4]**
- **Diuresis completed hours faster than with furosemide after oral dosing[5]**
- **Better GI absorption[6,7]**
- **Early evening dosing helps prevent nocturnal dyspnea**

As with all loop diuretics, excessive doses of BUMEX can lead to profound diuresis with water and electrolyte depletion, including hypokalemia, so serum electrolytes should be monitored.

Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

References: 1. Flamenboum W: *Am J Cardiol 57*(2):3BA-43A, 1986. **2.** Broter DC, Fox WR, Chennavosin P: *J Clin Pharmacol 21*:599-603, 1981. **3.** Iber FL, Baum RA: *J Clin Pharmacol 21*:697-700, 1981. **4.** Henning R, Lundvoll O: *Eur J Clin Pharmacol 6*:224-227, 1973. **5.** Physicians' Desk Reference, 40th ed. Orodell, NJ, Medical Economics Company, 1986, pp. 939, 1480. **6.** Pentikainen PJ, *et al: Br J Clin Pharmacol 4*:39-44, 1977. **7.** *Losix, A Review.* Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 1980.

BUMEX®
(bumetanide/Roche)
0.5-mg, 1-mg and 2-mg scored tablets
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome.
Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.
Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.
CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.
WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels.
Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.
Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use: Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, orthritic pain, musculoskeletal pain and vomiting.
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, osterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.
HOW SUPPLIED: *Tablets,* 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Paks of 30; Tel-E-Dose® cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.
Ampuls, 2 ml, 0.25 mg/ml, boxes of ten.
Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

P.I. 0985

Roche Laboratories
a division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

In acute and chronic edema due to CHF

A DIURETIC THAT GIVES YOU PREDICTABLE CONTROL

Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

Please see adjacent page for references and summary of product information.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

TexasMedicine

VOLUME 83 NOVEMBER 1987

Contents

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

J. Forrest Fitch, MD, McAllen
Secretary

James M. Graham, MD, Austin
Harold R. High, MD, Cuero
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

David Vanderpool, MD, Dallas
President

E. Rubin Bernhard, MD, San Antonio
Vice President

Val F. Borum, MD, Fort Worth
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Margie B. Peschel, MD, Fort Worth
Secretary

Robert G. Mickey, Austin
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd, Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Kathy Trombatore, Production Manager/Editorial Assistant
Patty Illich, Administrative Secretary/Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Alice L. Smith, MD, Dallas
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

PRINTING OFFICES

c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates are: Members, $16 per year; nonmembers and institutions, $20 per year; foreign, $24 US currency; single copy, $2.

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701

ARTICLES

27 Changing trends in the diagnosis and treatment of Rh alloimmunization
Kenneth J. Moise, Jr, MD; John D. Milam, MD; Robert J. Carpenter, Jr, MD

33 Presurgical gamma globulin in a patient with ITP
Emerardo Falcon, Jr, MD; Jack B. Alperin, MD; Frank H. Gardner, MD

40 Spontaneous regression of tubal pregnancy: current considerations
Nicola Perone, MD

44 Winning with medical review
Lolly Beaird, PhD, RN

EDITORIALS

5 Texas statewide cancer registry
R.F. Peterson, MD

6 Impact of litigation on maternal mortality studies
Anthony P. Lucci, MD

7 Tetanus in Texas
Janice A. Mendelson, MD

FEATURE

51 The girls carve a niche in the "old boys' club"

MEDICINE AND THE LAW

59 Drug testing
Helene A. Alt, JD

NEWS

TMA in action

11 House of Delegates to meet in Austin, Nov 20–21

11 Board proposes priorities in four major areas

11 Physicians should do more than care for the sick

12 Committees sponsor symposia May 12–15 in San Antonio

Health line

12 AIDS education program succeeds in Harris County

12 Report examines commercial and homemade baby food safety

15 Use of salt tablets linked to contact lens infection

Socioeconomics

15 Experts consider changes in payment mechanisms

19 Panel considers issues related to medical ethics

19 96% of Texas grads pass tests in jurisprudence, sciences

19 JCAH expands operations, changes name to JCAHO

Capital comments

19 Legislators evaluate 70th session, physicians' influence

21 Lawmakers consider funding for AIDS counseling, testing

21 Newsmakers

DEPARTMENTS

8 Letters
49 Clinical abstracts
50 Information for authors
62 Deaths
66 Medicine in literature
80 Continuing education directory

ON THE COVER

Increasing numbers of women are making places for themselves in the medical profession. This month's cover article (page 51), written by Donna B. Jones, news editor of *Texas Medicine*, presents some of the reasons why women physicians are underrepresented in the TMA and AMA, and the views of several women who are leaders in organized medicine. Cover design by Ed Triggs.

COMING NEXT MONTH

Scheduled for the December issue of *Texas Medicine* are articles on Hirschprung's disease, management of children with "new morbidity" disorders, preventing all-terrain vehicle accidents, physician attitudes toward latchkey children and corporal punishment, Suprofen-induced acute renal failure, and complications of intramuscular glucocorticoids.

ISN'T IT TIME TO REWARD YOURSELF?

You've earned a BMW.
With your hard work, your dedication, your professionalism.
After all you've accomplished, it doesn't make sense to settle for less than the ultimate flying machine: BMW.
Because it's time to reward yourself.
And you've earned it.

JUST ARRIVED:

1987 325 Convertible

The first BMW Convertible offered in over three decades. Its 168-h.p. engine has 39% more power than 1986 3-series.

JUST ARRIVED:

1987 7-Series

An entirely new luxury sedan for 1987. From its aerodynamic exterior to its hand-sewn leather interior, this car's impact will be measured in decades, not years.

JUST ARRIVED:

1987 M-Series

The three new M-Series BMW's represent the two fastest production sedans available in the U.S., (M3 and M5), and a limited edition sports coupe (M6) with such features as a hand built 256-h.p. engine and hand tuned suspension.

Over 150 new BMW's to choose from. All with ABS brakes and 3 year/36,000 mile warranty.

The New B M W

BMW CENTER

FACTORY AUTHORIZED.

4623 Fredericksburg Rd. at Loop 410 San Antonio **(512) 732-7121**

Texas statewide cancer registry

The Texas Cancer Control Act of 1979 provided for the establishment of a statewide cancer registry. At the request of the Cancer Registry Division of the Texas Department of Health, hospitals, clinical laboratories, and cancer treatment centers furnished abstracts to the division, including such data as diagnosis, state of disease, medical history including occupational information available, laboratory data, tissue diagnosis, method of treatment, and family history of cancer. The Cancer Control Act allowed payment for abstracts subject to the availability of funds.

In November 1986 the Texas Medical Association's House of Delegates, upon the recommendation of the TMA Committee on Cancer, adopted the following policy statement on a statewide cancer registry:

> TMA encourages medical staffs of each hospital in the state to appoint a committee on cancer as a standing committee of the medical staff organization, responsible for analysis of the cancer care provided in the facility and development of continuing education programs. TMA endorses and encourages medical staffs to support establishment of a cancer registry in the hospital to provide the data on cancer needed for evaluation of cancer management and development of continuing education programs.
>
> TMA supports full implementation of the statewide cancer registry which was established by the 66th Texas Legislature effective September 1, 1979, and amended by the 69th Texas Legislature House Bill #4 effective 1985, and commends the Texas Department of Health for implementation of the program.

On Aug 6, 1987, the Governor vetoed the TDH's Cancer Registry appropriations for FY 1988–1989, and recommended transfer of the registry function to the Texas Cancer Council (TCC). TDH funding for the registry ceased, therefore, as of Aug 31, 1987. The TCC funded the TDH registry for the month of September to enable it to continue functioning while the two agencies examined the options available for continued registry operation over the long term.

The problem that now faces the state's health agencies and health care professionals is how to maintain continued collection of cancer data within the fiscal constraints of the state's current budget.

The need to continue cancer data collection is clear. On Sept 23, representatives from the TDH and other health organizations met with a subcommittee of the TCC to review the need for cancer data and to explore alternative approaches for its collection. An advisory panel comprised of epidemiologists and physicians provided input to the discussion. There was a consensus that cancer *incidence* data is essential to a wide range of health activities including: cancer prevention and screening program planning and design, planning of treatment facilities, providing for manpower needs, cancer program targeting (for example, public education campaigns), providing quality patient care, evaluating programs, and monitoring the public health of the state.

Improving the health of Texans is the key TMA objective, and cancer is an important element in the collective health of our citizens. As the number two killer, cancer must be monitored to identify focal areas of increased incidence among Texans. By monitoring cancer rates, health professionals can spot unusual increases that might signal a public health problem. This allows subsequent investigation of these regions for possible cause, such as environmental hazards, infectious agents, demographic differences, and other factors. The Cancer Registry Division Report FY 1986 notes that in the previous year, it was involved in seven potential cancer "cluster" investigations in Texas, and responded to 402 requests for data (1). Moreover, information can be gained concerning variations of prevalence and types of malignancies among different populations in the state.

Cancer data can also identify cancer risks for a given population and thereby help physicians in instituting surveillance of patients according to specific risk factors. Moreover, current epidemiologic research projects depend upon this data; any break in the accumulation of the data jeopardizes the continuation and completion of these studies and can compromise years of research.

Approaches to cancer data collection can vary from a cancer incidence-only reporting system to a full-fledged tumor registry (including detailed patient information). The majority of attendees at the September TCC subcommittee meeting felt that the cancer registry activity should be modified to a cancer incidence type data system including identifiers, diagnosis, and perhaps staging information. More detailed and specific information could be collected in targeted studies, for example, in the investigation of cancer clusters.

The TCC and TDH continue to investigate alternatives and possible funding through the TCC. The amount of TCC funds for reallocation is obviously limited. Not only must one be aware of the significant scope and cost of this type of data collection activity by itself, but this cost becomes even more significant when one considers that the TCC must also maintain its programs to implement the Texas Cancer Plan.

The TDH Cancer Registry Division Report FY 1986 stated that the "Cancer Registry Division is currently operating at $34 per incident case." During the fiscal year 1985–1986, 27,923 abstracts were submitted (1). New Hampshire, which utilizes an incidence only data cancer registry, requiring a minimal data set, estimates its cost at $25 per case. The estimated number of cases of cancer in the state of Texas for 1986 was 49,000 (2). Thus, regardless of the approach, funding poses a considerable dilemma.

During this uncertain and difficult period, while the TCC and the TDH work through the funding dilemma, it is important that physicians act. Because of the clear need for cancer incidence data, the TMA Committee on Cancer, on Sept 25, 1987, reaffirmed its support of a statewide cancer registry. The committee also encourages all physicians to support continued collection of cancer registry data statewide and through their own hospitals' tumor registries, which contribute mightily as major sources of information.

R.F. PETERSON, MD
Member, Texas Medical Association Committee on Cancer, 2401 S 31st St, Scott and White, Temple, TX 76508.

REFERENCES
1. Texas Department of Health Cancer Registry Division Report FY 1986, Austin.
2. American Cancer Society: 1986 Cancer Facts and Figures. New York, American Cancer Society, Inc., 1986, p 6.

Impact of litigation on maternal mortality studies

Maternal death studies are important in the assessment of quality obstetrical care. More significant, however, is the role they have in actually reducing maternal mortality (1). In Texas, individual case studies have been reviewed at the hospital, county, and state levels as an ongoing evaluation of obstetrical care and peer review. In addition, both maternal and perinatal mortality rates are important standards used by governments in judging the overall level of health care attained by various nations.

Established in 1935, the TMA Committee on Maternal Health was charged with collecting and drawing appropriate conclusions from data on perinatal morbidity and mortality within the state. The committee was to review and comment on laws and governmental regulations that affect maternal health. It was to define problems and make recommendations concerning quantity, quality, and utilization of health care services for women and children in Texas. Through its studies and recommendations, the committee has been instrumental in making perinatal health care available to many areas of the state where such care was nonexistent. This work has been done in a quiet, unobtrusive, nonpunitive manner, but the educational and legislative programs that have come from the committee have effectively influenced perinatal mortality rates. Corrective action has been offered in areas of the state where significant problems surfaced. This work is especially important in a state as large as Texas, where gaps in perinatal health care can be a problem (2).

In recent years, however, the valuable work of these committees has been seriously impaired because of the rising fear of litigation related to releasing case studies to the maternal mortality committees. An incident occurred in 1974 that led to the disruption of the Harris County Maternal Mortality Committee and subsequently impaired the work of the TMA Committee on Maternal Health.

To the dismay of committee members, the records of a specific maternal death were subpoenaed in a lawsuit and inadvertently released to the plaintiff's attorneys. This intrusion occurred despite the fact that the records were then (and still are) protected by Texas statutes. Upon appeal by TMA attorneys to the attorney general, the statute was reaffirmed and the records were returned. They were not allowed as evidence.

The effect in Harris County, however, where a significant number of deaths occur each year, was to eliminate a large number of cases from educational study and peer review. The damage to confidentiality of death records and the hospital peer review records seriously impeded further collection of such cases. The result of seizing those records was that physicians in Harris County stopped making their records available for review. There followed a significant reduction in the number of cases available to the state. From 1971 through 1973, 279 cases were reviewed by the TMA committee; from 1981 through 1983, only 94 cases were reviewed. Tragically, and in part because of concern for possible lawsuits, the downward trend is continuing, with only 17 cases available for peer review in 1985.

Here was an example of flagrant intrusion into the peer review process of organized medicine resulting in disruption of an activity whose prime purpose is to improve the quality of obstetrical care.

Physicians have long been criticized for not policing themselves. In fact, this form of peer review has been accepted as a professional responsibility by physicians practicing obstetrics ever since the state's original "maternal mortality committee" was formed in 1935. The work of these committees has been done by physicians who volunteered to review the results and recommend action to improve care. In the future it may be impossible to find physicians willing to participate in this activity if by so doing they are exposed to legal action.

The crisis facing the practice of obstetrics over the next few years is multifaceted. A short-term solution is difficult to envision. Some of the forces threatening to eliminate quality obstetrical care are as follows:

1. Present laws concerning malpractice and the lack of control regarding the filing of frivolous lawsuits. Many physicians practicing obstetrics have lost faith in the judicial system as it relates to malpractice. Obstetrics is especially vulnerable because an unsuccessful outcome, many times unpredictable, may mean a lawsuit even though the case has been properly managed. Tort reform is badly needed for the maintenance of obstetrical care.

2. Escalating insurance premiums are an unreasonable economic burden on obstetrical health care. In a survey conducted by the TMA Subcommittee on Maternal Health in 1985, 44% of the obstetricians stated that they would have to quit obstetrics in the next two years if the present upward trend in premiums continued. Many physicians are also losing their insurance coverage because of linkage with previous lawsuits.

3. Uncertainty about continued peer review. Present laws do not sufficiently protect physicians from legal action when they serve on hospital or state review committees. The solution to protecting patients' interests should be sought in developing quality assurance programs in facilities delivering obstetrical care. Stronger peer review programs with improved maternity services would result in less personal and economic loss than does the present *post hoc* system of compensating victims after they suffer a catastrophic outcome. Legislative action is needed to support committees such as the TMA Subcommittee on Maternal Health and to allow organized medicine a forum for continuously monitoring the quality of

maternity care on a statewide basis without risk of legal interference.

During the past 40 years, we have seen a marked reduction in maternal and fetal mortality rates throughout Texas and the United States. Peer review committees have played a significant role in this accomplishment. The present liability crisis threatens the productivity of these committees and paradoxically may cause an increase in mortality if the committees' objectives are defeated.

4. Hospitals with obstetrical units must provide better quality assurance and risk management programs. The liability crisis has focused attention on the obstetrical service as being a high-risk area. Proper support services should be made available in order to reduce the number of incidents leading to litigation.

Each of these factors needs attention if we are to stop the escalating loss of physicians practicing obstetrics who are unwilling or unable to face the growing risk of litigation and mounting cost of insurance. By accepting the status quo with regard to malpractice suits, the public will eventually suffer because when obstetrical care becomes scarce in any area, less trained individuals inevitably move in to fill the vacuum. Thus, if the present liability trend continues, it is evident that maternal and fetal death rates will increase as the number of well-trained physicians providing obstetrical care decreases.

ANTHONY P. LUCCI, MD
Chairman, Texas Medical Association Subcommittee on Perinatal Health, 3838 Hillcroft, #335, Houston, TX 77057.

REFERENCES

1. Speert H: Maternal Mortality Studies in Obstetrics and Gynecology in America—A History. American College of Obstetrics and Gynecology, 1980, pp 146–149.

2. Leveeno K, Cunningham FG, Roark ML, et al: Prenatal care in the low birth weight infant. Obstet Gynecol Nov 1985.

Tetanus in Texas

Tetanus should be 100% preventable, but in the United States from 1982 through 1984, 253 cases were reported, of which 26 were in Texas. Seventy-one percent of the 224 patients whose ages were reported were 50 years of age or older. The case fatality rate was 26% overall and 52% for patients 60 years old and older (1).

Of the 231 non-neonatal tetanus patients reported in the US from 1982 through 1984, 56 (24.2%) had never been immunized. Two hundred fifteen (93%) of the patients had received fewer than two doses of toxoid prior to onset of tetanus or had received an unknown number of doses (1). Limited surveys made in various parts of the United States between 1977 and 1983 indicated that more than 40% of people 60 years of age or older lacked protective levels of circulating antitoxin antibody against tetanus and that the percentage of those not adequately protected increases with increasing age (1,2).

The present summary is derived from personal study of copies of the individual tetanus surveillance case reports received by the Texas Department of Health (TDH) from 1982 through 1986. TDH staff deleted patient identification and provided additional input. Other aspects of tetanus in Texas can be found in the TDH Bureau of Epidemiology Annual Summaries (3).

The 45 cases reported in Texas from 1982 through 1986 included five infants ranging in age from two days to 15 months. (It now seems possible that the diagnosis of neonatal tetanus in a 53-day-old infant in 1982 may have been erroneous, but this cannot be verified at this time.) The only child (age 5 years) in this series was reported in 1983. He was thought to have received one DTP dose when he was 3 to 4 months old and only one documented subsequent dose four days prior to the onset of tetanus symptoms. All of the other cases ranged in age from 18 months to 94 years. None of the patients had documented adequate primary tetanus immunization. Fifteen (33%) had never been immunized. Twelve (26.6%) had either known or suspected inadequate immunization, and in 16 instances immunization history was unknown. Four had "boosters" within ten years of the onset of the symptoms, suggesting the importance of verifying adequate primary immunization before considering a booster to give protection lasting ten years. Recommended immunization regimens are readily available (2).

There were 22 male and 23 female patients. Five patients were listed as black, 18 Hispanic, and 22 white. Four patients were stated to be diabetic, but there may have been others since this was not a specific item on the reporting forms. The etiology of infection in most cases was *trauma* or probable trauma in a contaminated environment. Two patients were intravenous *drug abusers*. Four patients developed tetanus following *surgical procedures*: a 75-year-old woman who had a gastrectomy, a 44-year-old woman who had surgical removal of a "cyst of leg," a 70-year-old woman who had a bunionectomy, a 71-year-old diabetic man who died following onset of tetanus after a below-knee amputation for "foot gangrene," and a 52-year-old man who sustained a metal splinter in a finger and an unhealed tape "burn." (In this last case, the splinter injury had occurred at the patient's farm two weeks to one month before symptoms began. The adhesive tape "burn" followed a cardiac catheterization 14 days before the onset of tetanus.) A 15-month-old girl who had been bitten and later scratched by a raccoon was "found on admission to also have a necrotic Meckel's diverticulum."

A total of 12 (26.6%) of the 45 patients died. A 33-year-old woman who had never been immunized against tetanus died of tetanus after a foot injury. All of the others who died were over 50 years of age, including the four patients with known diabetes (the post-amputation case mentioned earlier in this article and three patients who developed tetanus following ulceration or infection of a lower extremity).

This review of the Texas tetanus cases for the past five years demonstrates the importance of being *certain* that everyone has adequate primary immunization against tetanus and receives a toxoid booster every ten years. Current immunization history should be included in the records of all patients,

and every adult should carry his or her own "shot record" (and possibly that of his or her children) on at least a wallet card. Adequate records help prevent life-threatening under-immunization and also help prevent inadvertent administration of tetanus boosters at less than five-year intervals, which increases the possibility and severity of adverse side effects in an adequately immunized individual (2). It is especially important that tetanus protection be maintained in elderly people, diabetics, and others with vascular or neurological deficiencies who might not be aware of minor injuries and who might be more susceptible to infection.

Anyone responsible for the health care of elderly people should have a procedure enabling the ten-year update time to be noticed, acted upon, and recorded, since many people now live active lives well into their 90s and even the inactive ones may acquire tetanus.

In summary, although tetanus should be preventable, 45 cases were reported in Texas from 1982 through 1986, inclusive. The patients ranged from two days to 94 years in age. Half of the patients were female, and almost half (22) of the patients were non-Hispanic white. None were known to have received adequate tetanus immunization. Twelve (26.6%) of the patients died; 11 of these were more than 50 years old. Immediate action should be taken to assure that *everyone* has received adequate primary immunization and boosters at ten-year intervals thereafter.

JANICE A. MENDELSON, MD
3803 Barrington Dr, San Antonio, TX 78217.

NOTE: Since this editorial was submitted for publication, four additional cases have been reported to the Texas Department of Health. Two cases occurred in 1986 and two occurred from January through August of 1987.

REFERENCES*

1. Tetanus—United States, 1982–1984. MMWR 34(39):602, 607–611, 1985.
2. Immunization Practices Advisory Committee: Diphtheria, tetanus, and pertussis: guidelines for vaccine prophylaxis and other preventive measures. MMWR 34(27):405–414, 419–426, 1985.
3. Texas Department of Health Bureau of Epidemiology: Reported Morbidity and Mortality in Texas, Annual Summary 1982–1985.

*Available from the Infectious Diseases Program, Bureau of Disease Control and Epidemiology, Texas Department of Health, 1100 W 49th St, Austin, TX 78756. *Morbidity and Mortality Weekly Report (MMWR)* is also available from the Centers for Disease Control, US Department of Health and Human Services, Public Health Service, Atlanta, GA 30333.

Verapamil may cause depression, confusion, and impotence

I recently hospitalized a 45-year-old white man for suicidal depression and impotence. He had been taking verapamil for hypertension about four months before admission. Soon thereafter, according to his wife, the patient became depressed, impotent (including the loss of his normal morning erections), and confused. He had never had a history of angina, congestive heart failure, or arrhythmia.

When admitted to our psychiatric hospital, he was taking 240 mg of verapamil every morning and 120 mg at bedtime, and his thinking was circumstantial and tangential, but he was not delusional. He was markedly depressed, and fearful that his wife of 28 years was going to leave him (even though she had indicated to him on multiple occasions that she intended to work this through with him). He was suicidal, but had not harmed himself. He had a mild confusional state, with intermittent disorientation. His blood pressure on admission showed a diastolic pressure of 120 mm Hg.

After calling his physician, we decided to obtain cardiological consultation, and the physician and cardiologist recommended discontinuation of verapamil and instituted hydrochlorothiazide/triamterene twice daily. His blood pressure normalized instantly, with diastolic pressure hovering around 90 mm Hg. Within 36 hours he had had four erections, and within 72 hours his circumstantiality, tangentiality, and confusion had remitted, and his thought process became goal oriented. His depression lifted within 36 hours as well.

The *Physician's Desk Reference* lists confusion, fatigue, and impotence as occurring in 0.5% to 1.1% of patients who take verapamil, but I have seen patients on this medication before who have had similar reactions (but not as severe), and in each instance the syndrome reversed after discontinuation of verapamil.

JAY FOGELMAN, MD
Medical Science Center, 711 W 38th, Suite B 14, Austin, TX 78705.

Pelvic inflammatory disease article prompts questions

The article entitled "Pelvic Inflammatory Disease in the Adolescent," by Dr Bernard Gonik and associates (February 1987) raises several questions and concerns.

The authors do not state the criteria employed for establishing a diagnosis of pelvic inflammatory disease, nor do they specify what they mean by pelvic inflammatory disease. What definition of fever was used? Did the patients have elevated WBC counts, sedimentation rates, or C-reactive protein values?

How was the presence of an adnexal or cul-de-sac mass established and confirmed? The diagnosis was confirmed in 6%. Did all patients who had a laparoscopic examination have evidence of acute salpingitis? If only 49% of the patients had fever, what other criteria were utilized to establish the diagnosis of PID?

Did the seven patients who failed to respond to medical therapy come from the group with a pelvic mass? What was the final pathology report in each of these cases? What was done with the group with a pelvic mass? Did all these patients have fever?

The authors state that half of the patients presented with advanced disease. How do they know this, as only 6% underwent laparoscopic examination? In the best of studies, only 65% of the patients with a clinical diagnosis of PID have the disease confirmed by laparoscopic examination.

This is a retrospective study, but the data are vague, the diagnosis can be questioned, and criteria for the diagnosis are not given. I would suggest to the authors that the stand for improving the outcome in patients with PID should be taken when the patient develops cervicitis or endometritis, not when she has salpingitis. First we must educate the physicians to recognize the patient at risk and the early signs of this disease.

SEBASTIAN FARO, MD, PhD
Associate Professor, Director, Section of Infectious Diseases, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.

Author's response

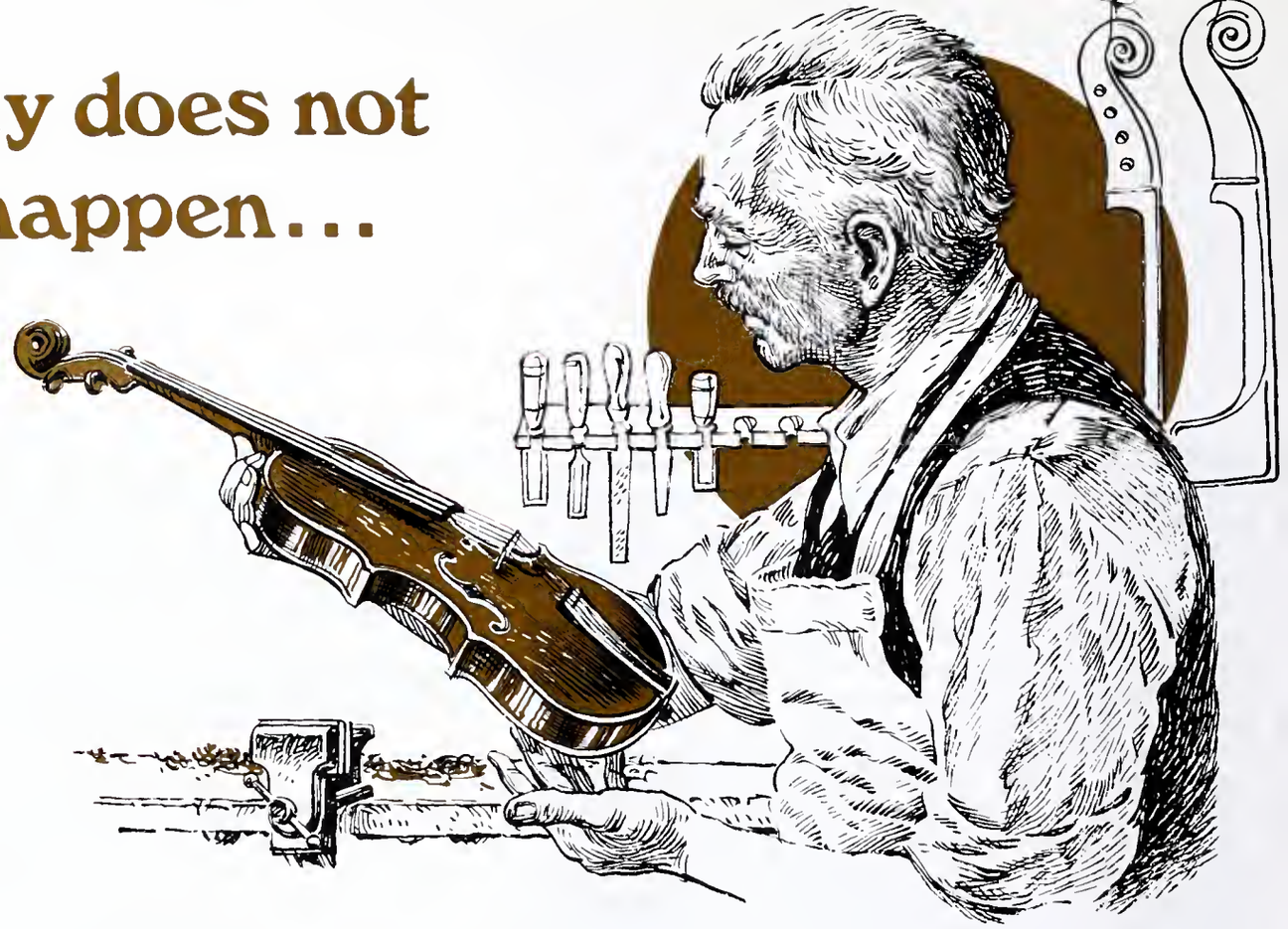
Thank you for the opportunity to respond to Dr Faro's letter concerning our article, "Pelvic Inflammatory Disease in the Adoleseent." Dr Faro, who is a respected authority in the area of infectious diseases in the field of obstetrics and gynecology, has raised some important concerns and issues which need to be emphasized.

The diagnosis of pelvic inflammatory disease (PID) is, for the most part, a clinical one. Criteria which were used for its diagnosis in our study were referred to in our original article (Hager WD, et al: "Criteria for Diagnosis and Grading of Salpingitis," Obstet Gynecol 61(1):113–114, 1983). As evidenced by our retrospective data, rarely does one utilize surgery (laparoscopy) to confirm the diagnosis in the clinical setting. Similarly, Dr Faro is well aware of the fact that WBC counts, sedimentation rates, and C-reactive protein are not definitive studies for establishing the diagnosis of PID. We supplied mean values for these first two laboratory studies in the published manuscript in Fig 1. "Advanced disease" was defined in our study by the finding of an adnexal or cul-de-sac mass on physical examination. As postulated by Dr Faro, patients with advanced disease more often failed to respond well to conservative therapy. When surgery was required, localized abscess formation and inflammation were uniformly identified.

The last point raised by Dr Faro is perhaps the most critical issue. Improving outcome in these adolescent patients should be approached from a preventative perspective. We agree that aggressive management aimed at eradicating STD-associated organisms, cervicitis, and endometritis should ultimately reduce the overall incidence of pelvic inflammatory disease. Unfortunately, as suggested in our manuscript, adolescents may worsen their own status and prognosis by underutilizing available health care systems.

BERNARD GONIK, MD
Division of Maternal-Fetal Medicine, The University of Texas Health Science Center at Houston, 6431 Fannin, Suite 3.204, Houston, TX 77030.

Quality does not just happen...



ABOUT YESTERDAY

Since 1955, your Texas Medical Association has sponsored an Insurance Program as a service to its members. It is a responsibility your Association takes seriously. The Program's primary goal has always been—to provide the best coverage at the lowest possible cost. Through the years, the Program has been expanded to meet the needs of its members. This has resulted in the advanced offerings we have today.

ABOUT TODAY

And today, we doubt if your Program can be beat. The cost, in relation to benefits, makes your Program "the Competition." Of course, a good program without good service is of no value to its members. That is why your Association has a salaried staff working to assist you. The staff works in your best interest—whether it concerns enrollment, service or claims.

...AND TOMORROW

The Insurance Trust maintains an independent actuary to advise and guide us. As inflation continues to rise, maximums have been increased to cope with tomorrow's insurance requirements. We are planning with accountability to you in mind. Even though we cannot solve all the problems that arise in a given period of time, we think our efforts prove—we are always working in your best interests.

Your Committee on Association Insurance Programs meets at least three times annually to carefully analyze premium income, claim payments, reserve funds, enrollment and service. As we strive to serve you, you can help by giving us your comments—questions—suggestions. Call or write—better yet, attend one of our meetings. All lines of communication are open.

Committee on Association Insurance Programs
Ronald J. Pinkenburg, M.D., Chm.
Robert A. Dennison, M.D.
Albert E. Gunn, M.D.
Charles F. Hendler, M.D.
Lorry J. O'Brien, M.D.
Shirley Molenich, M.D.
Pedro DeLeon, M.D.
Henry A. Dunzi, M.D.
James R. Sowyers, M.D.
Mrs. Thomas G. Gloss, Aux. Rep.

for information, contact

TEXAS MEDICAL ASSOCIATION INSURANCE PROGRAM

1901 NORTH LAMAR BOULEVARD AUSTIN, TEXAS 78705
CALL TOLL FREE: 1-800-252-9318

- *Long Term Disability Income*
- *Life Insurance*
- *Major Medical*
- *Office Overhead*
- *Personal Accident*

underwritten by

PRUCO LIFE INSURANCE COMPANY OF TEXAS
A Subsidiary of The PRUDENTIAL

TMA IN ACTION

House of Delegates to meet in Austin, Nov 20–21

Texas Medical Association's House of Delegates will conduct its 1987 interim session Nov 20–21, 1987, at the Hyatt Regency Hotel in Austin. Among the topics under consideration will be the association's priorities for 1988 and a planning process for implementing the priorities. The association's priorities relate to four areas: education, representation, standards, and organization.

The delegates also will consider a report from the Council on Constitution and Bylaws suggesting the mechanisms for implementing a single board that combines the functions of the Board of Trustees and the Executive Board. The House of Delegates approved the concept of a single board in May 1987.

Other reports to the delegates relate to physician reimbursement and advertising.

All TMA members are invited to attend the interim session, which convenes at 2 pm, Friday, Nov 20. At 3:30 pm, or immediately following the opening session, reference committees will conduct hearings at which members may voice their opinions on issues before the house. The delegates will reconvene at 8 am, Saturday, Nov 21, to hear and act on recommendations from the reference committees.

Board proposes priorities in four major areas

The TMA Executive Board has proposed 1988 priorities in four major areas: education, reprcsentation, standards, and management. The House of Delegates will consider the priorities during its interim session, Nov 20–21, 1987, in Austin. Advocacy for physicians and patients, public health, and ethical standards were among the specific areas cited by the board for emphasis during the coming year. A planning process introduced by the Board of Trustees will support thc priorities and assure the wiscst use of the association's resources.

Meeting in Austin, Sunday, Sept 27, the board also considered proposals related to the association's structure, the peer review system, AIDS, and physician advertising.

The Board of Trustees reported that the association is expected to end 1987 with income exceeding expenses. As of Aug 31, 1987, the association had spent $4,691,539 and taken in $4,769,000. However, the trustees warned that it probably will be necessary to propose a dues incrcase for 1989. "Even with limitations on expense growth and ongoing efforts to increase membership and nondues income sources, projections for 1989–1993 indicate budget deficits for these years," they said.

In other reports, both the Council on Socioeconomics and the Council on Health Facilities expressed concern regarding the Health Care Financing Administration's plans to release hospital mortality data on institutions participating in the Medicare program. The executive board approved the distribution of a letter advising hospital medical staff societies, chiefs of staff, and county medical societies of the plan and how best to respond.

Noting the importance of physician input in the PRO review process, the board also approved a recommcndation from the Council on Socioeconomics "That TMA solicit county medical societies to submit names of physicians in their area willing to participate in the PRO review process."

In another area related to PROs, the board approved the TMA Physician Advocacy Committee's recommendation "That the National Heritage Insurance Company (NHIC) be requested to provide TMA with written copies and explanations of their quality assurance and utilization review programs as soon as they become available." NHIC reviews hospitals with fewer than 200 Medicaid admissions per year. The advocacy committee has requested further information from the company in view of concerns expressed by TMA members.

The Board of Councilors reported that it has adopted the following opinion concerning a physician's responsibility for the treatment of an AIDS patient: "A physician shall either accept the responsibility for the care and treatment of a patient with acquircd immune deficiency syndrome (AIDS), human immunodeficiency virus (HIV), antibodies to HIV, or infection with any other probable causative agent of AIDS, or refer the patient to an appropriate physician who will accept the responsibility for the care and treatment of the patient." In addition to supporting that opinion, the Council on Public Health recommended that the Board of Councilors support "the concept that physicians should not be required to inform patients of the physician's own HIV antibody status, but that the physician should avoid procedures where the HIV virus could possibly be transmitted, similar to precautions physicians would take to prevent the spread of hepatitis B."

Councilors also informed the Executive Board that an ad hoc committee will study the issue of physician advertising as it pertains to board certification. The latter board referred to the TMA Ad Hoc Committee on Physician Advertising a resolution from the Texas Allergy Society requesting that "the Texas Medical Association endorse the concept that physicians who advertise specialty services but who are not certified by the appropriate recognized national specialty board must include a disclaimer in the advertisement to this effect." The Executive Board's referral will include a recommendation against the resolution.

Physicians should do more than care for the sick

Amcrican Medical Association President James E. Davis, MD, dismissed as "tommyrot" the view that physicians need only care for the sick. Physicians also have an obligation to their professional organizations and the public, he said.

Dr Davis, a Durham, NC, surgeon, was the keynote speaker during Texas Medical Association's fall conference, "Advocacy 87: Speaking Out on the Issucs." Registration reached approximately 900 during the conference at the Austin Hyatt Regency, Saturday, Sept 26.

"The people of this country don't like us," Dr Davis told his audience, and he advised his listeners to: (1) maintain their professionalism through continuing education, (2) look and act professional,

(3) maintain quality of care through peer review, and (4) speak out on issues with a unified voice.

"We have finer people in medicine than we had before—we're having trouble letting people know," Dr Davis said. "If people know that we care, we will persist," he concluded.

Terry Townsend, CAE, Austin, president and chief executive officer of the Texas Hospital Association, urged the audience to protect the profession with the same spirit of bravery and commitment of the legendary fighting Gurkhas in his presentation, "A Good Gurkha is Hard to Find: Advocacy of Your Hospital."

Other speakers discussed ethics, AIDS, legislative activities, and physician reimbursement. In addition to the Saturday session, the weekend featured pre- and postconference workshops on marketing and Medicare reimbursement, which were presented free of charge to TMA members. Professionally produced audiocassette tapes of each conference presentation and the workshops are available for sale. Further information is available from the TMA Communication Department, 1801 N Lamar Blvd, Austin, TX 78701, phone (512)477–6704, ext 212.

Committees sponsor symposia May 12–15 in San Antonio

Fear of AIDS and other transfusion-transmitted diseases is the subject of the upcoming Symposium on Blood Banking and Blood Transfusion, presented in conjunction with Texas Medical Association's 121st Annual Session. The blood banking program is one of 10 committee-sponsored symposia to be presented during the session, May 12–15, 1988, in San Antonio.

The Committee on Aging and Nursing Homes' Symposium on Geriatrics will update information on physical and mental health problems in the aged, including Alzheimer's disease, muli-infarct dementia, decubitus ulcers, and constipation. The unique problems of female athletes, sports nutrition, and cardiac problems are among the topics to be explored during the Symposium on School Health, sponsored by TMA's Committee on School Health. The Committee on Maternal and Child Health is working with the Section on Obstetrics and Gynecology to present an overview of "Hot Problems in Obstetrics-Gynecology."

Other committee-sponsored symposia will review fetal alcohol syndrome, hypertension/intervention for acute myocardial infarction, medical-legal issues, the impaired physician, tort liability trends, and sports injuries and prevention.

The committee symposia, along with programs presented by 24 scientific sections and 30 specialty societies and related medical organizations, will add up to 300 hours of Category 1 credit toward the American Medical Association Physician's Recognition Award.

HEALTHLINE

AIDS education program succeeds in Harris County

The Harris County Medical Society and the Houston Academy of Medicine launched in August a comprehensive, physician-sponsored AIDS education effort. The program, targeted at junior and senior high school students, teachers, and the community, has been so successful that materials are being reprinted.

Components of the program include a 96-page book, *AIDS: A Guide for Survival*, and two instructional videotapes, one for teachers and one for students. Nearly 200,000 copies of the book have been distributed to schools, pharmacies, and hospitals in Harris County.

The initial reaction to the instructional materials by educators was enthusiastic. Thirteen of the 23 school districts in the county currently are using the books and videotape, and administrators in other districts have expressed interest.

"We are very proud of the book and the videotapes," said Max Butler, MD, president of the Harris County Medical Society. "We are gratified that we have the support of our physician members, the educational community, and our area's religious community, even though some of the information is frank. These materials, we believe, will set the standard for AIDS education in Harris County and Texas."

Additional information on the program is available from the Harris County Medical Society, 400 Jesse H. Jones Library Building, Houston, TX 77030 (713)790–1838.

Report examines commercial and homemade baby food safety

Either commercial or homemade baby foods can be a safe, wholesome part of a nutritious diet for infants, according to the new report, *Baby Foods*, published by the American Council on Science and Health (ACSH), an independent scientific organization.

"Advocates of homemade baby foods have claimed that additives or other ingredients in commercial baby foods are causes for concern. But the truth is that homemade foods may contain more salt, sugar, water, or additives than their commercial equivalents," said ACSH Executive Director Dr Elizabeth M. Whelan. "If homemade baby foods are poorly chosen, carelessly prepared, or improperly stored, they may also be unsanitary or lacking in nutrients.

"We're not trying to discourage people from making homemade baby food. Parents who select and prepare foods carefully can certainly provide their infants with safe, nutritious meals," she continued. "On the other hand, parents who elect to use commercial products need not feel that they have sacrificed quality for the sake of convenience."

The technology currently used by baby food manufacturers maximizes nutrient retention and safety, and many desirable features of commercial baby food preparation simply cannot be duplicated at home, according to ACSH.

All parents should consult a pediatrician or registered dietitian to help them plan balanced diets for their infants at each stage of development, the report recommends.

To obtain a copy of the report, *Baby Foods*, send a self-addressed, stamped (66¢ postage), business-size envelope to Baby Food Report, ACSH, 47 Maple Street, Summit, NJ 07901.

Un-switch-ables

Patients and
physicians alike prefer

Transderm-Nitro®

nitroglycerin

2.5 mg/24 hr, 5 mg/24 hr, 10 mg/24 hr, 15 mg/24 hr

Almost three quarters of a billion* patches prescribed in the U.S. since 1982

The only patch with a rate-limiting membrane

Familiar, distinctive tan color and unique shape recognized by patients everywhere

There's no substitute for experience

All transdermal nitroglycerin products are being marketed pending final evaluation of effectiveness by the FDA.

C I B A

629-3468-A

(See Brief Summary of Prescribing Information on the next page.)

*Data on file, CIBA Pharmaceutical Co.

Transderm-Nitro® nitroglycerin
Transdermal Therapeutic System

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE INSERT)

INDICATIONS AND USAGE
This drug product has been conditionally approved by the FDA for the prevention and treatment of angina pectoris due to coronary artery disease. The conditional approval reflects a determination that the drug may be marketed while further investigation of its effectiveness is undertaken. A final evaluation of the effectiveness of the product will be announced by the FDA.

CONTRAINDICATIONS
Intolerance of organic nitrate drugs, marked anemia, increased intraocular pressure or increased intracranial pressure.

WARNINGS
In patients with acute myocardial infarction or congestive heart failure, Transderm-Nitro system should be used under careful clinical and/or hemodynamic monitoring.
In terminating treatment of anginal patients, both the dosage and frequency of application must be gradually reduced over a period of 4 to 6 weeks to prevent sudden withdrawal reactions, which are characteristic of all vasodilators in the nitroglycerin class.
Transdermal nitroglycerin systems should be removed before attempting defibrillation or cardioversion because of the potential for altered electrical conductivity which may enhance the possibility of arcing, a phenomenon associated with the use of defibrillators.

PRECAUTIONS
Symptoms of hypotension, such as faintness, weakness or dizziness, particularly orthostatic hypotension may be due to overdosage. When these symptoms occur, the dosage should be reduced or use of the product discontinued.
Transderm-Nitro system is not intended for immediate relief of anginal attacks. For this purpose occasional use of the sublingual preparations may be necessary.

ADVERSE REACTIONS
Transient headaches are the most common side effect, especially when higher doses of the drug are used. These headaches should be treated with mild analgesics while Transderm-Nitro therapy is continued. When such headaches are unresponsive to treatment, the nitroglycerin dosage should be reduced or use of the product discontinued.
Adverse reactions reported less frequently include hypotension, increased heart rate, faintness, flushing, dizziness, nausea and vomiting. These symptoms are attributable to the known pharmacologic effects of nitroglycerin, but may be symptoms of overdosage. When they persist the dose should be reduced or use of the product discontinued. In some patients, dermatitis may occur.

DOSAGE AND ADMINISTRATION
Therapy should be initiated with application of one Transderm-Nitro 5 mg/24 hr system to the desired area of skin. Many patients prefer the chest; if hair is likely to interfere with system adhesion or removal, it can be clipped prior to placement of the system. Each system is designed to remain in place for 24 hours, and each successive application should be to a different skin area.
Transderm-Nitro system should not be applied to the distal parts of the extremities.
The usual dosage is one Transderm-Nitro 5 mg/24 hr system. Some patients, however, may require the Transderm-Nitro 10 mg/24 hr system. If a single Transderm-Nitro 5 mg/24 hr system fails to provide adequate clinical response, the patient should be instructed to remove it and apply either two Transderm-Nitro 5 mg/24 hr systems or one Transderm-Nitro 10 mg/24 hr system. More systems may be added as indicated by continued careful monitoring of clinical response. The Transderm-Nitro 2.5 mg/24 hr system is useful principally for decreasing the dosage gradually, though it may provide adequate therapy for some patients when used alone.
The optimal dosage should be selected based upon the clinical response, side effects, and the effects of therapy upon blood pressure. The greatest attainable decrease in resting blood pressure that is not associated with clinical symptoms of hypotension especially during orthostasis indicates the optimal dosage. To decrease adverse reactions, the size and/or number of systems should be tailored to the individual patient's needs.
Do not store above 86°F (30°C).

PATIENT INSTRUCTIONS FOR APPLICATIONS
A patient leaflet is supplied with the systems.

HOW SUPPLIED

Transderm-Nitro System Rated Release *in vivo*	Total Nitroglycerin in System	System Size	Carton Size
2.5 mg/24 hr	12.5 mg	5 cm²	30 Systems...NDC 0083-2025-26
			*30 Systems...NDC 0083-2025-26
			*100 Systems...NDC 0083-2025-30
5 mg/24 hr	25 mg	10 cm²	30 Systems...NDC 0083-2105-26
			*30 Systems...NDC 0083-2105-26
			*100 Systems...NDC 0083-2105-30
10 mg/24 hr	50 mg	20 cm²	30 Systems...NDC 0083-2110-26
			*30 Systems...NDC 0083-2110-26
			*100 Systems...NDC 0083-2110-30
15 mg/24 hr	75 mg	30 cm²	30 Systems...NDC 0083-2115-26
			*30 Systems...NDC 0083-2115-26
			*100 Systems...NDC 0083-2115-30

*Institutional Pack

C87-23 (Rev. 7/87)

Dist. by:
CIBA Pharmaceutical Company
Division of CIBA-GEIGY Corporation
Summit, New Jersey 07901

© 1987, CIBA (9/87) 629-3468-A C I B A

SOUTHWEST MEDICAL ASSOCIATES

ENDOCRINOLOGIST NEEDED

BC/BE to join our large multispecialty practice group in Las Vegas, Nevada. This is an excellent practice opportunity in a growing area (population 500,000+). Fee for service and prepaid health care.

Excellent benefit package including full pension, profit sharing, paid malpractice insurance and relocation.

Send CV and three references to:

SOUTHWEST MEDICAL ASSOCIATES
Employment
P. O. Box 15645
Las Vegas, NV 89114-5645

Equal Opportunity Employer

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas

Use of salt tablets linked to contact lens infection

The American Aeadcmy of Ophthalmology has issued a public health alert about the danger of using salt tablets to prcpare homemade saline solutions for rinsing, storing, or cleaning contact lenses. The acadcmy has urged the Food and Drug Administration to remove the tablcts from ophthalmic shclves, and to require that they be labeled: "Not for Eye or Contact Lens Use."

The aeademy eited reeent studies linking improper use of homemadc saline solutions by soft contact lens wearers to *Acanthamoeba* keratitis, a rare but dangerous corneal infection that can result in blindness.

"*Acanthamoeba* infections of the cornea are rare," said Seott M. MaeRae, MD, assistant professor of ophthalmology at thc Oregon Health Scicnees Univcrsity in Portland. "But any contact lens wearer who does not follow a careful cleaning and disinfecting regimen is at risk of getting this or other types of serious eorneal infeetion."

Homemade saline solutions made with salt tablets and distilled water cannot be guaranteed sterile. Recent studies show that such solutions are frequently contaminated with dangerous microorganisms including *Acanthamoeba*.

Acanthamoeba is a free-living protozoa that thrives in moist environments. The infection is extrcmely serious beeause it is difficult to treat with antibiotics. Infected patients often havc months of disabling pain, reduced vision, and even partial or total blindness. They may require eorneal transplantation.

For a copy of the academy's public health note on *Acanthamoeba* keratitis, or a broehure on contact lenses, send a stamped, self-addressed business size envelope to Inquiry Clerk, American Academy of Ophthalmology, PO Box 7424, San Franciseo, CA 94120-7424.

SOCIOECONOMICS

Experts consider changes in payment mechanisms

"It's only a matter of time before Congress revamps the way physieians are paid under Medicare," aecording to Jim Bob Brame, MD, TMA's immediate past president and a member of the Physician Payment Rcview Commission. Dr Brame moderated a panel discussion of reimbursement and physician payment issues during TMA's fall conferenee, Sept 26, in Austin. On hand to discuss future payment mcchanisms were Jerry D. Sconce, Dallas, Regional Administrator of Region VI, Health Care Financing Administration (HCFA); Paul Ginsburg, PhD, Washington, DC, executive direetor, Physieian Paymcnt Review Commission; and Eugene S. Ogrod II, MD, Saeramento, technieal advisor, internal medicine, to the Harvard/HCFA/AMA Relative Value Seale Study.

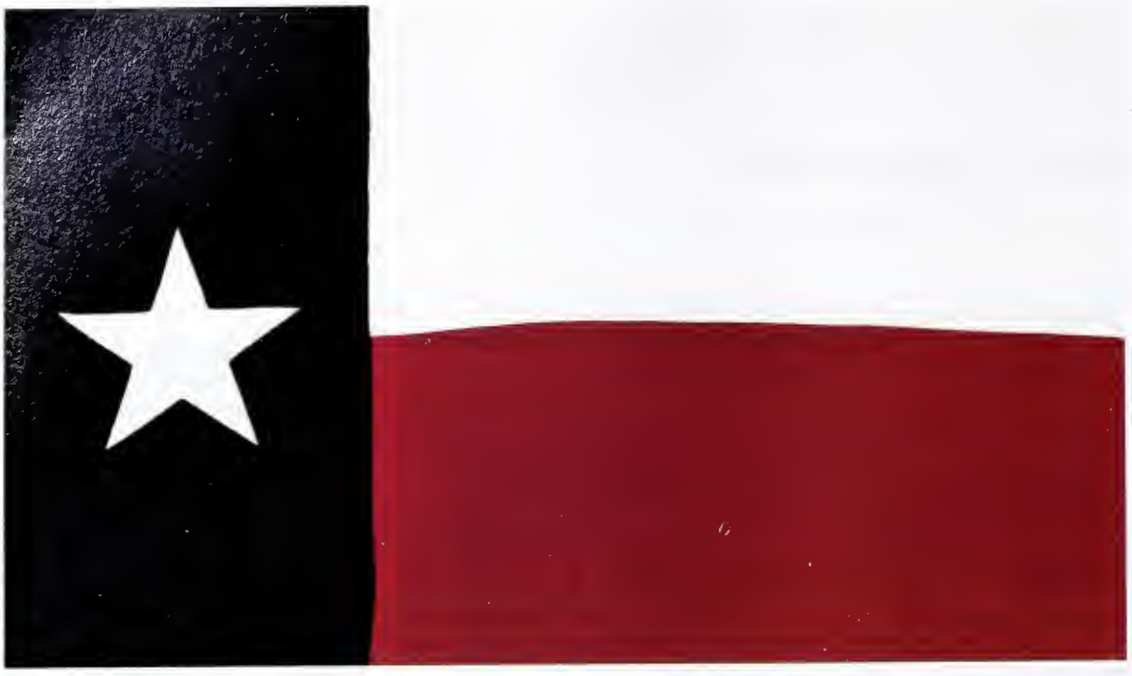
Mr Seonee opened with a historical overview of Mcdicarc, noting that reimbursement was the first area to ehange because "that's where we spend 60% of our funds." Hc added that threc altcrnatives are under consideration for reimbursement under Medicare Part B: a fee schedule, a diagnosis-related groups systcm, and capitation. Mr Sconce predicted that "we will move to some form of fee schedule within the next two to three years." He added that he does not perceive widespread support for mandatory assignment at the federal level.

Dr Ginsburg reported that the Physician Payment Review Commission (PPRC) is studying fees in light of inherent reasonableness, geographic variation, and overhead costs. He emphasized that the volume of physieian serviees to Medieare reeipients, whieh is growing by 7% annually, is of primary concern to the commission.

Dr Ogrod reported that thc Harvard/HCFA/AMA Relative Value Scale Study is attempting to rank praetiee aetivities according to perceived mental effort and judgment, physical difficulty and skill, and stress. He noted there is "incredible agreement" among physicians as to which procedures are more difficult. The relative value scale study group faces three major challcnges, he said. Those challenges are to apply the scale across specialties, base a coding system on the information, and incorporate into the system a factor that refleets the patient's condition at the time of treatment.

Paul Ginsburg, PhD (left); Jerry D. Sconce, and Eugene S. Ogrod II, MD, discuss reimbursement and physician payment issues during TMA's fall conference, Sept 26, in Austin.

State flag of Texas



Flag It.

To complete your prescription,
be sure to sign on the right,
on the "Dispense As Written" line.
This "flags" both pharmacist and patient
that you want the *brand* to be dispensed.
And it protects your decision.

VALIUM®

brand of
diazepam/Roche®

scored tablets

2 mg 5 mg 10 mg

The one you know best.

The cut out "V" design is a registered trademark
of Roche Products Inc.

Copyright © 1987 by Roche Products Inc.
Manati, Puerto Rico 00701. All rights reserved.

ROCHE®

Panel considers issues related to medical ethics

Philosopher Peter A. French, PhD, challenged physicians in the Socratic tradition as he questioned basic assumptions about the physician-patient relationship and the physician's role as an advocate for the patient during Texas Medical Association's recent fall conference. Dr French is chairman of the Department of Philosophy at Trinity University, San Antonio. Joining him in a discussion of medical ethics were Harold Skaggs, MD, Austin, president and chief executive officer of Austin Diagnostic Health Systems; and Lynn E. Jensen, PhD, Chicago, vice-president for health service policy at the American Medical Association.

Dr French maintained that moral ambiguities are not part of the everyday practice of medicine. Instead, he said, the premier ethical issue facing physicians is cost containment. He accused physicians of making Faustian bargains with third party payers, who gain control of the treatment of patients. In this setting, physicians assume the role of technicians.

Dr French further questioned whether physicians are qualified to guide patients in situations that raise ethical questions. "The greatest failing in our education system has been the failure to require professionals to study the humanities," he said. "If you find yourself having trouble with these ethical questions, perhaps you're overstepping your training," Dr French suggested.

Dr Jensen reminded the audience that cost containment should not be won at the price of the patient's welfare. He outlined the AMA's activities that promote patient advocacy. These include a new office of quality assurance and efforts to assure physician input in the peer review process. He emphasized the association's efforts to alleviate the professional liability crisis, which "has injected an adversarial element into the very heart of the physician-patient relationship."

Dr Skaggs urged physicians "not only to do right, but to see that right is done." That duty, he said, must override any desire to see health care delivered in the same way it was delivered before the implementation of managed care systems.

96% of Texas grads pass tests in jurisprudence, sciences

Ninety-six percent (904) of Texas medical school graduates passed examinations in jurisprudence, basic sciences (FLEX, component I), and clinical science (FLEX, component II), which were administered by the Texas State Board of Medical Examiners. Ninety percent (127) of graduates from other US medical schools outside of Texas passed all three tests, as did 50% (5) of graduates of foreign medical schools. Altogether, 1,037 applicants passed the three examinations.

Among Texas medical schools, the percent of successful examinees ranged from 93% (The University of Texas, Houston) to 97% (Baylor College of Medicine and Texas Tech). Ninety percent of the graduates of the Texas College of Osteopathy passed the tests.

Ninety-five percent (1,037) of all MDs (Texas, US, Canadian, and foreign graduates) and 85% (65) of all DOs passed.

JCAH expands operations, changes name to JCAHO

Reflecting its expanded areas of operation, the Joint Commission on Accreditation of Hospitals has become the Joint Commission on Accreditation of Healthcare Organizations.

Commenting on the change, Charles A. McCallum, DMD, MD, chairman of the Joint Commission Board, noted, "Over the past two decades, the Joint Commission has progressively developed standards applicable to a broad spectrum of organized healthcare settings. Today, the five accreditation programs evaluate long term care facilities, ambulatory care organizations, various mental health facilities and programs, and hospices, in addition to hospitals."

In 1988, the Joint Commission will initiate a new home care accreditation program, and the commission is exploring methods for reviewing health maintenance organizations (HMOs) and independent practice associations (IPAs).

The Joint Commission accredits more than 5,100 of the nation's 7,000 general acute and psychiatric hospitals. Additionally it accredits more than 3,100 healthcare organizations in diverse activity settings.

Founded in 1951, the Joint Commission on Accreditation of Healthcare Organizations is a private, nonprofit corporation. Its corporate members are the American Hospital Association, the American Medical Association, the American College of Physicians, the American College of Surgeons, and the American Dental Association. Members of its professional and technical advisory committees represent more than 40 national healthcare associations and professional societies, and each includes public member representation.

CAPITAL COMMENTS

Legislators evaluate 70th session, physicians' influence

The medical profession might have been premature in its bid for tort reform during the 70th session of the Texas Legislature, according to Sen Jack T. Montford (D-Lubbock). During TMA's fall conference in September, Senator Montford participated in an evaluation of the session and how physicians influenced the legislative process. Joining him in the discussion were Sen Chet Brooks (D-Pasadena), and Representatives Brad Wright (R-Houston) and Mike McKinney, MD (D-Centerville).

Senator Montford explained that the tort reform effort was launched while related issues were awaiting resolution in the courts, where a significant amount of tort policy is written. In that vein, Representative Wright encouraged physicians to participate in judicial elections.

Turning to the role of insurance companies in the professional liability crisis, Senator Montford expressed amazement at the insurance industry's lack of accountability. Insurance reform has to come with tort reform, he said. "There's got to be a fair rule of disclosure so we can get to the heart of this problem," he added.

Representative McKinney noted, "All of us should have a role in the legislature." He advised that medicine's legislative ini-

The AMA Hospital Medical Staff Section Tenth Assembly

DECEMBER 3-7, 1987
WESTIN PEACHTREE PLAZA
ATLANTA, GEORGIA

Represent your medical staff

For Information Contact:

Department of Hospital Medical
Staff Services
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610
Phone (312) 645-4747 or 645-4753

tiatives should be presented not as economic issues, but as "people issues." He added, "Our interests as doctors generally reflect the public's interest."

William G. Gamel, MD, Austin, chairman of TMA's Council on Legislation, moderated the panel discussion and presented each legislator a plaque in appreciation of his efforts on behalf of Texas medicine.

Lawmakers consider funding for AIDS counseling, testing

Following hearings in US Senate and House of Representatives committees, legislation funding AIDS counseling and anonymous, voluntary testing was awaiting further action at press time. The American Medical Association supports the bill, which Rep Henry A. Waxman (D-Calif) sponsored in the House, and Sen Edward Kennedy (D-Mass) sponsored in the Senate.

According to a report from the AMA, the bill would authorize $400 million for grants to fund voluntary testing and counseling for HIV antibodies. The bill also would establish federal protections of confidentiality for information regarding AIDS and antibody status. Finally, the bill would prohibit discrimination against persons on the basis of their antibody status or diagnosis of AIDS in the areas of (1) employment; (2) housing; (3) public accommodations; and (4) government services.

Exceptions to the antidiscrimination provision would be allowed for bona fide medical justifications prescribed by the Centers for Disease Control to prevent transmission of the virus.

AMA Executive Vice President James H. Sammons, MD, stated, "The American Medical Association is pleased that legislation will be introduced by Rep Henry A. Waxman to provide for AIDS testing and counseling. The bill also would contain necessary safeguards to ensure confidentiality and prohibit discrimination on the basis of AIDS or HIV antibody status.

"A recent report adopted by the AMA's House of Delegates stated: 'Knowledge that a person is infected with the AIDS virus can be the crucial predicate to changing behavior. Thus, voluntary testing for antibodies to the AIDS virus, when used in conjunction with appropriate counseling, and when offered in the context of appropriate antidiscrimination and confidentiality protections, serves the important public health purpose of providing impetus for behavior changes that minimize the risk of transmitting the AIDS virus.'

"The legislation proposed by Representative Waxman is an example of a reasoned public health response to the problem of AIDS and is consistent with our policy. We hope that congress will not delay in providing the necessary funding for voluntary testing along with appropriate confidentiality and antidiscrimination protections."

NEWSMAKERS

HERBERT C. ALLEN, JR, MD, Houston, recently received the highest honor bestowed by the American College of Nuclear Medicine. Dr Allen was awarded the Gold Medal at a convocation of the college in recognition of his 40-year contribution to the development of nuclear medicine for the diagnosis and treatment of human disease.

Two new associate deans for The University of Texas Health Science Center at Dallas have been chosen. JOHN BURNSIDE, MD, recently assumed duties in the newly created position of associate dean for clinical affairs. DAVID BILHEIMER, MD, accepted the newly created post of associate dean for academic affairs. Dr Burnside came to UTHSCD from the Milton S. Hershey Medical Center of the Pennsylvania State University. Dr Bilheimer was formerly medical director and an associate dean at Parkland Memorial Hospital.

WILLIAM H. DONOVAN, MD, has been named vice president of medical affairs at The Institute for Rehabilitation and Research (TIRR) in Houston. A specialist in physical medicine and rehabilitation, Dr Donovan will continue to serve as co-director of the Spinal Cord Injury Center and director of the Amputee Program at TIRR, where he has served since 1980.

RONALD F. GARVEY, MD, MBA, Dallas, has been appointed medical director and acting chief executive officer of University Medical Center. He also has been appointed by The University of Texas Health Science Center at Dallas as associate dean for clinical affairs at UMC, a research and clinical facility that will be affiliated with Southwestern Medical School. Prior to his appointment, Dr Garvey was professor of surgery at Southwestern Medical School.

CRAIG PRATT, MD, Houston, director of The Methodist Hospital's coronary care unit, has been named chairman of the 1987-90 Cardiovascular and Renal Drugs Advisory Committee of the Food and Drug Administration by US Secretary of Health and Human Services Dr Otis Bowen.

DEL BARKER STIGLER, MD, medical director of the Scott and White Clinic, Caldwell, has been sworn in as president of the Texas Academy of Family Physicians. Dr Stigler formerly served three years as treasurer for the organization, followed by one year as president-elect. Other newly-elected TAFP officers are: A. E. MGEBROFF, MD, Yoakum, president-elect; C. TIMOTHY LAMBERT, MD, El Paso, vice president; and BOB C. JONES, MD, Madisonville, treasurer.

Ronald F. Garvey, MD, MBA

GENERAL INTERNIST

The Scott & White Clinic, a multi-specialty clinic of 350 physicians, seeks a general internist to join its growing 12-physician staff in its Taylor facility. The Taylor community has a population of 11,000, located north of Austin. Medical school affiliation available. Excellent educational and cultural opportunities. Competitive income and excellent benefits. Send CV to:

Mr. E. Smith
Department of
Internal Medicine
Scott & White
2401 South 31st Street
Temple, TX 76508

or for more information, please call
817/774-2580.

S&W SCOTT & WHITE

SOUTHWEST MEDICAL ASSOCIATES

EMERGENCY PHYSICIAN

Exceptional opportunity for well trained, career oriented Emergency Physician to join busy Urgent Care facility (24 hours a day/7 days a week) in multispecialty group practice in Las Vegas, Nevada, population 500,000+. Requires BC/BE in a primary care specialty with emergency room/urgent care experience, or emergency medicine.

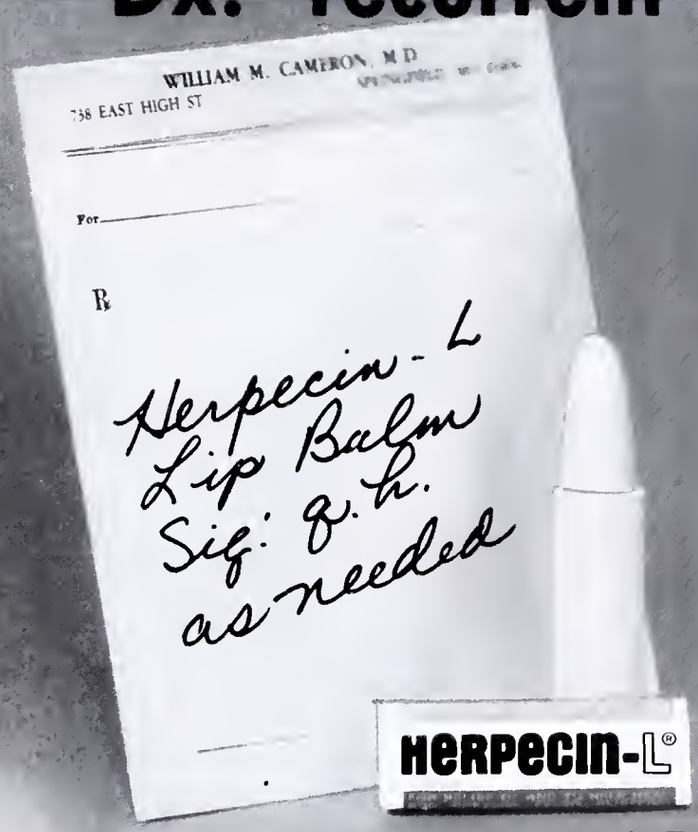
Excellent benefit package including paid malpractice insurance and relocation.

Send CV and three references to:

SOUTHWEST MEDICAL ASSOCIATES
Employment
P. O. Box 15645
Las Vegas, NV 89114-5645

Equal Opportunity Employer

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms . . .** blisters **never formed . . .** remarkable." DH, MA

"(In clinical trials) **. . . response** was **dramatic. HERPECIN-L . .** proven **far superior.**" DDS, PA

"All patients claimed **shorter duration . . .** at **prodromal symptoms . . .** HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

American Physicians Insurance Exchange

MALPRACTICE

It's an allegation that can happen to anyone.

You don't have to stand alone!

We wrote the book on malpractice insurance. We started writing professional liability insurance over 12 years ago, when the other insurance companies were looking for a way out.

Why? Because we're 100% owned and controlled by dentists and physicians. We know you can't operate your practice without malpractice insurance.

We know a good insurance company must insure *all* specialties. And we have never settled a claim without an insured's written consent. We believe that you shouldn't have to stand alone. If you're concerned about your insurance company's commitment to you, give us a call today.

1301 Capital of Texas Highway, Suite #B-300
Austin, Texas 78746
(512) 328-1520

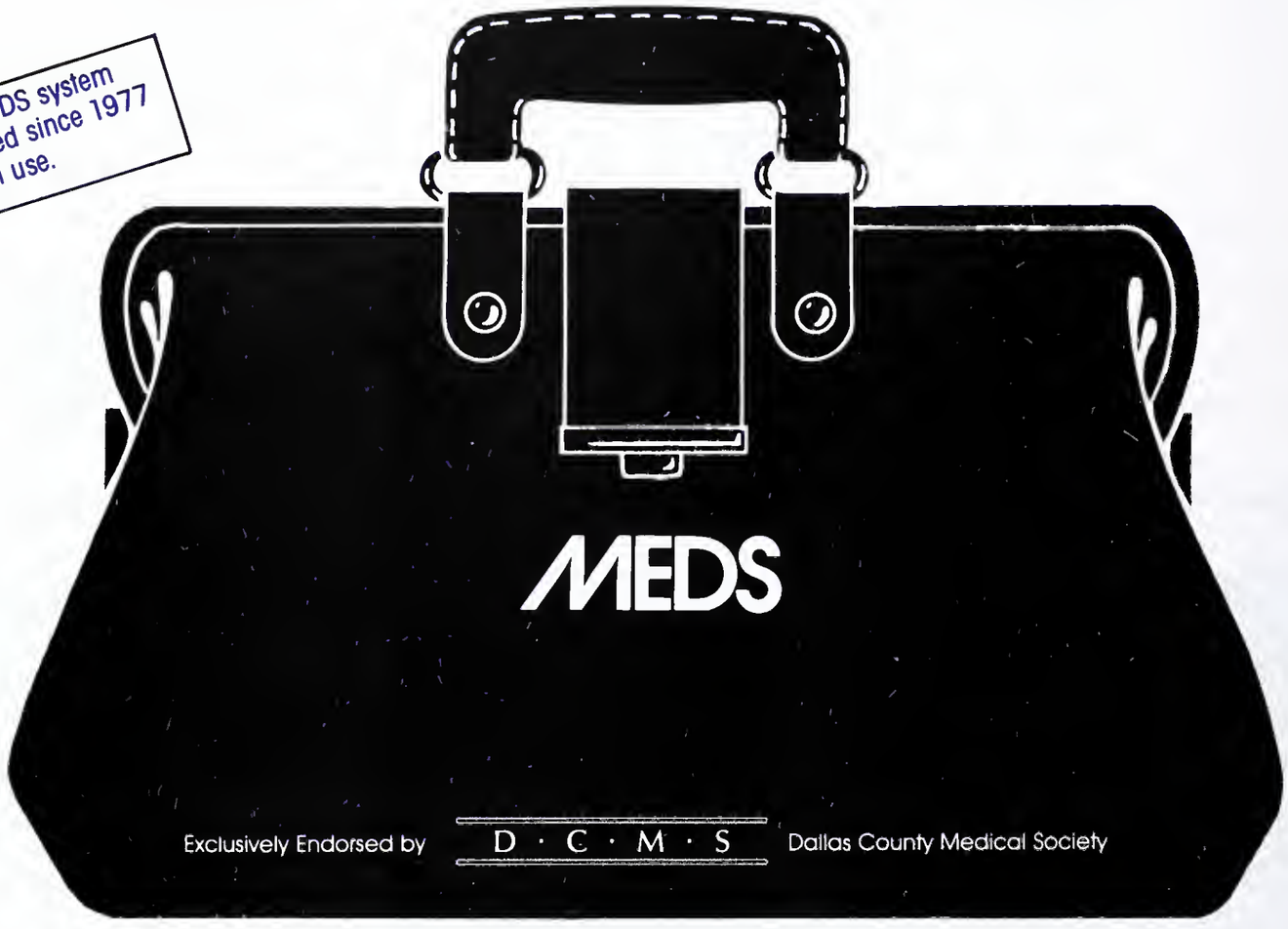
Nationwide 1-800-252-3628

In San Antonio:
Bill Sweet
(512) 497-3205

Physicians Computerized Office Management System

WE MAKE HOUSE CALLS

Every MEDS system purchased since 1977 is still in use.



Exclusively Endorsed by D · C · M · S Dallas County Medical Society

MEDS will individually tailor an Office Management system to fit your practice needs. Texas based, MEDS has been satisfying the data processing needs of physicians across the Southwest for over eight years. MEDS systems help simplify and streamline the increasingly complex problem of managing your practice. Contact us so that we can show you all the ways your practice can benefit from a system of your own.

MEDS PROVIDES

- Electronic claims submissions
- State of the art hardware
- Ongoing service, support and training
- Patient scheduling and recall
- Insurance filing and tracking

MEDS

Medical Data Systems, Inc.
Corporate Office Dallas
Ten Thousand North Central Suite 1000
Dallas, Texas 75231

Natianwide call tall free 1-800-922-MEDS
Dallas/Fort Warth Metro call 263-9812

San Antonia Office
15600 San Pedro Suite 301
San Antania, Texas 78232
(512) 490-0322

for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

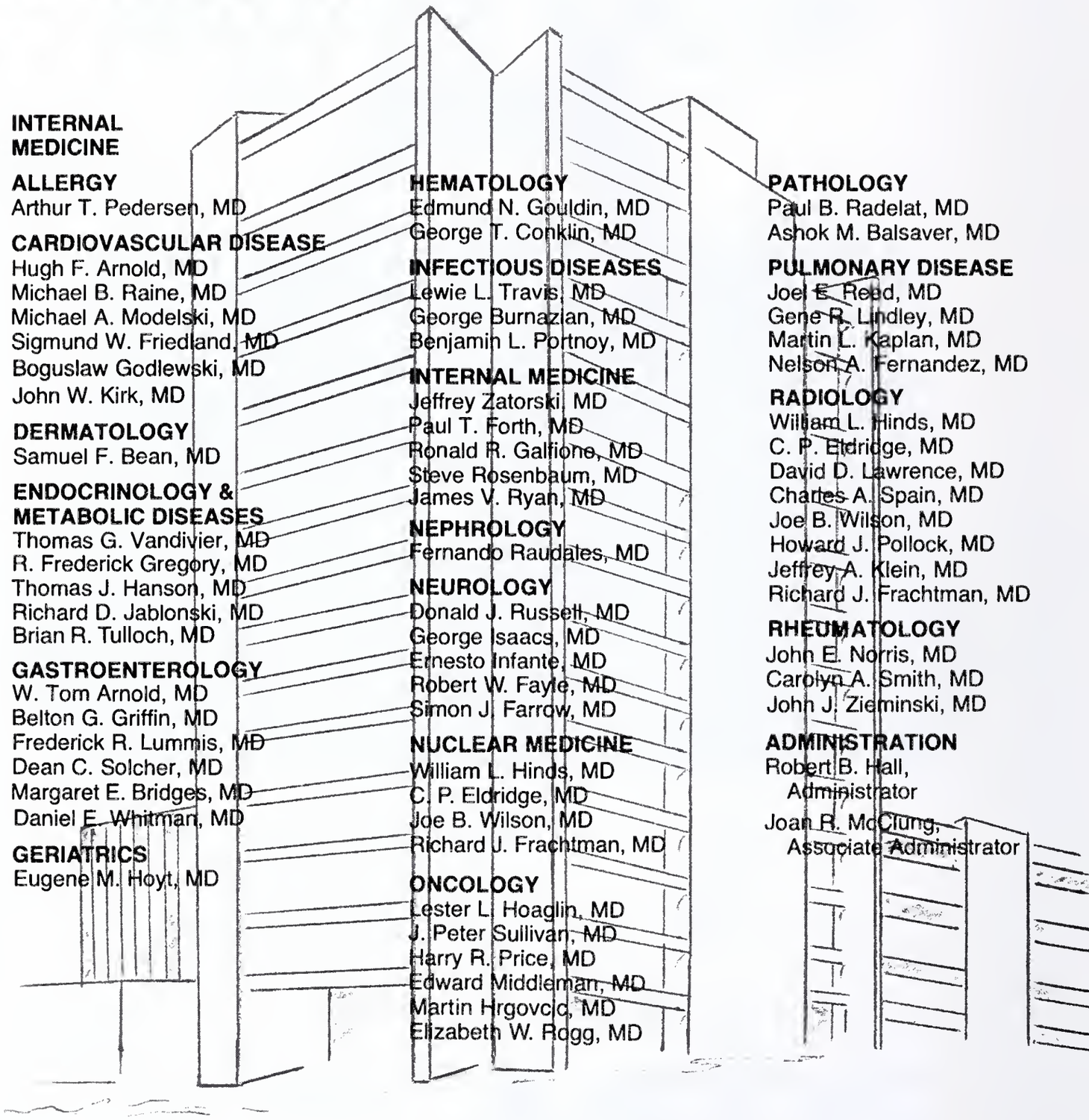
Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH



INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD
John W. Kirk, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Daniel E. Whitman, MD

GERIATRICS
Eugene M. Hoyt, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
James V. Ryan, MD

NEPHROLOGY
Fernando Raudales, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

NUCLEAR MEDICINE
William L. Hinds, MD
C. P. Eldridge, MD
Joe B. Wilson, MD
Richard J. Frachtman, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

KENNETH J. MOISE, JR, MD
JOHN D. MILAM, MD
ROBERT J. CARPENTER, JR, MD

Changing trends in the diagnosis and treatment of Rh alloimmunization

Since the rhesus antigen was first described in 1940, many advances have been made in the treatment of Rh alloimmunization. Although intraperitoneal transfusion was once the only means of treatment before delivery, ultrasound-guided intravascular transfusion has opened new doors in therapy for the severely anemic fetus. Fetal blood typing can now be performed in cases of heterozygous paternal genotype, thereby circumventing the need for repeated amniocentesis in the case of an Rh-negative fetus. Prior to 27 weeks of gestation, fetal hematocrit determination by umbilical cord sampling has been found to be more accurate than amniotic fluid studies in predicting the severity of fetal hemolytic disease. Use of autologous blood from the mother may reduce the risk of hepatitis, AIDS, and other transfusion-related viral infections in the fetus.

Hemolytic disease of the newborn (HDN) was probably first described in 1609, in the French literature, when a midwife reported the birth of twins with this disorder. The first-born twin was hydropic and died shortly after birth, whereas the second twin developed severe jaundice and died soon thereafter (Fig 1).

In 1939, Levine and Stetson (1) initially described the discovery of an antibody in a woman who gave birth to a stillborn fetus and who later experienced a severe hemolytic reaction after receiving a transfusion of her husband's blood. The antibody was subsequently given the name anti-Rh.

The pathophysiology of this disease was further elucidated in 1940, when Landsteiner and Weiner (2) injected rhesus (Rh) monkey cells into rabbits and guinea pigs. When the resulting antisera were mixed with human blood samples from Caucasians, agglutination occurred in 85% of the samples. These individuals were said to be Rh positive. In 1941, Levine and associates (3) were able to demonstrate a causal relationship between HDN and Rh antibodies in Rh-negative women. Wallerstein (4) introduced the technique of neonatal exchange transfusion in 1945, resulting in a 50% reduction of the perinatal mortality owing to erythroblastosis fetalis. Despite this advance, the 25% of Rh-affected fetuses that became hydropic and succumbed in utero remained beyond the reach of therapeutic intervention.

The treatment of rhesus alloimmunization was revolutionized by the classic article published by Liley (5) in 1961. In this study, Liley obtained amniotic fluid from 101 Rh-sensitized pregnancies between 27 and 41 weeks of gestation and spectrophotometrically analyzed it for bilirubin at 450 nm (ΔOD_{450}). He found that the severity of the hemolytic disease of the fetus could be predicted by considering the magnitude and trend of the 450-nm peak of amniotic fluid. He also described the three zones of the Liley curve, which became the cornerstone in the management of the Rh-sensitized patient.

Prior to 1963, treatment of the severely affected fetus involved premature delivery, with exchange transfusion after birth. Intraperitoneal transfusion (IPT) of the fetus can also be traced to the work of Liley. A colleague inadvertently entered the fetal peritoneal cavity during an amniocentesis for ΔOD_{450} analysis, and the fluid was noted to be darker than amniotic fluid. Liley recognized this as ascitic fluid and injected a radiopaque dye. The resulting radiograph revealed a complete outline of the peritoneal cavity of the fetus. Later, a visiting English geneticist returning from Nigeria demonstrated to Liley that, after adult red cells were injected into the peritoneal cavity of children affected with sickle cell anemia, evidence of normal red cells was observed on peripheral blood smears. Using standard radiographic techniques, Liley performed his first intraperitoneal transfusion by placing paper clips at specific locations on the maternal abdomen and then injecting radiopaque dye into the fetal peritoneal cavity to confirm proper placement of the needle. Although the initial three procedures ended in loss of the fetus, the first successful IPT was reported in 1963 (6).

The transfusion method described by Liley remained unchanged until 1981, when several authors (7,8) proposed that ultrasound replace fluoroscopy as the means of confirming correct needle placement. Further improvements in resolution enabled ultrasound to become the primary modality used during IPT today. The radiation exposure formerly associated with the procedure was eliminated by this advance.

1. Historical perspective of rhesus disease.

1609	First reported case of probable hemolytic disease of the newborn
1939	Rhesus antibody described
1940	Description of rhesus antigen
1941	Hemolytic disease of the newborn linked to rhesus antibodies
1945	Neonatal exchange transfusion introduced
1961	Introduction of the Liley curve
1963	First successful intraperitoneal transfusion
1981	Ultrasound replaces flouroscopy for needle guidance during intraperitoneal transfusions
1981	First direct fetal intravascular transfusion using fetoscopy
1982	Ultrasound-guided direct intravascular transfusion first described
1985	Use of D-tubocurarine to achieve fetal paralysis for intrauterine transfusions introduced
1986	First US reports of direct and exchange intravascular transfusions under ultrasound guidance appear in literature

Kenneth J. Moise, Jr, MD, and Robert Carpenter, Jr, MD, Prenatal Diagnostic Center, Department of Obstetrics and Gynecology; John D. Milam, MD, Department of Pathology, Baylor College of Medicine, 6720 Bertner Ave, Houston, TX 77030.

Until recently, the IPT continued to be the sole method of intervention for fetuses severely affected by Rh alloimmunization. Fetal hydrops continued to represent a therapeutic dilemma, since survival rates of only 21% were noted if ascites was present during the first IPT (9). When fetal hydrops is present, blood transfused into the fetal peritoneal cavity is absorbed at a much slower rate (10). To solve this problem, English investigators, Rodeck and associates (11), pioneered the technique of direct intravascular transfusion. Well known for his vast experience with fetoscopy, Rodeck successfully punctured the umbilical vessels at the umbilicus or at the placental insertion under direct visualization and then transfused blood directly into the fetal circulation. In a later report concerning this new method, Rodeck described a survival rate of 85% when fetal hydrops was present (12). Reversal of the hydrops was noted after the first or second intravascular transfusion. One year later, Bang and colleagues (13) used ultrasound guidance to transfuse blood directly into the abdominal portion of the fetal umbilical vein. The technique of umbilical vessel puncture with 20- to 26-gauge needles under ultrasound guidance markedly reduced the 2% to 5% rate of fetal loss previously associated with the use of the 14-gauge fetoscope (14). Further work by Daffos, in France, using a 20-gauge needle to perform umbilical cord puncture for diagnostic purposes, has shown that, in experienced hands, the procedure is associated with minimal risk for the fetus (15). Since the publication of his series of 606 cases, Daffos has performed over 1,300 cord samplings with a 0.23% incidence of fetal loss directly related to the procedure (personal communication; October, 1986).

A further development in the evolution of intravascular transfusion was first described by de Crespigney and coworkers in 1985 (16). These authors used intramuscular curare, administered into the fetal thigh under ultrasound guidance, in three cases to produce paralysis for the procedure. Since their first report, this Australian group has used this technique in 50 additional procedures (personal communication, September 1986). Paralysis potentially decreases the incidence of injury that might occur secondary to fetal movement. At Baylor College of Medicine, we have used this technique in conjunction with 84 procedures in 32 fetuses undergoing various in utero procedures and have found no evidence of deleterious effects. Recently, we have begun using pancuronium (Pavulon) instead of curare to achieve fetal paralysis for transfusions. This change has resulted in a shorter period of paralysis after completion of the procedure.

In the past several months, two centers in the United States (Yale and Mt Sinai) have published descriptions of their experience with intravascular fetal transfusions. Grannum and associates (17) have used a technique of exchange transfusion, whereas Berkowitz's group (18) promotes simple direct intravascular transfusion. Although each method has inherent advantages and disadvantages, preliminary comparison reveals that the fetal hematocrit undergoes less of a decline between transfusions when the exchange technique is used (Grannum, personal communication, October 1986). The Baylor group uses a third technique, consisting of exchange intravascular transfusion performed in conjunction with standard intraperitoneal transfusion. In a series of 23 transfusions, the results of which have not yet been published, we have been able to achieve stable fetal hematocrits between transfusions performed at two-week intervals. In addition, we have attempted to allow the fetus to remain in utero until studies of amniotic fluid reveal pulmonary maturity (mean gestational age, 35.6 weeks). Despite the fact that the collective US experience with intravascular transfusion involves more than 200 cases (19), delineation of the optimal method for transfusion in cases of fetal Rh disease awaits further experience with these various techniques.

The risk of graft-vs-host disease (GVHD) developing in the infant following intrauterine transfusions deserves consideration. Irradiation of red blood cells (including deglycerolized red blood cells) and other blood components is an appropriate means to eliminate the risk of GVHD.

The ability to sample the fetal hematologic environment has opened new doors in our understanding of hemolytic disease of the fetus. This important advance has allowed assessment of the fetal hematocrit and use of this information to guide therapy. Rodeck (20) has shown that the fetus does not usually become hydropic until the hematocrit falls below 15%. Assessment of the fetal hematocrit has also been informative in studying the predictive value of amniotic fluid ΔOD_{450} measurements. In the original study by Liley, only the amniotic fluid of fetuses past 27 weeks' gestation was studied. Fetal hematocrit determinations have substantiated the fact that ΔOD_{450} levels in this group of patients are highly predictive of the severity of fetal disease. Niswander (21) measured ΔOD_{450} levels in nonsensitized pregnancies between 10 and 24 weeks' gestation and concluded that the bilirubin content of amniotic fluid increases from 10 to 17 weeks, remains stable to 26 weeks, then decreases to term. Based on these data, it would appear that extrapolation of the various zones of the original Liley curve backward to assess ΔOD_{450} levels prior to 27 weeks of gestation would be an inaccurate means of detecting fetal anemia. A fetus with a low Zone 2 ΔOD_{450} value at 22 weeks of gestation might actually be very anemic, since the normal ΔOD_{450} value

at that gestational age would be much lower than the upper limits of Zone 1 of a modified Liley curve. Work by Nicolaides (22) correlating fetal hematocrits by means of umbilical blood sampling with ΔOD_{450} measurements in 59 Rh-sensitized pregnancies between 18 and 25 weeks of gestation has confirmed the inaccuracy of extrapolated Liley curves. Indeed, these authors reported that the pregnancies with the most severely anemic fetuses had low values of ΔOD_{450}. It therefore seems that direct measurement of the hemoglobin level of the fetus by means of umbilical cord puncture may be more reliable than ΔOD_{450} evaluation in assessing fetuses of less than 27 weeks of gestation.

Determination of the fetal blood type is now possible, owing to the ability to obtain fetal blood. If the paternal genotype is known (this can be determined at most blood banks), the chance that the fetus will inherit a certain antigen can be calculated. If the father is heterozygous for a particular antigen involved in the sensitization, there is a 50% chance that the fetus may not possess the antigen in question [for example, if the mother has an anti-Rho (D) titer of 64 (dilution of 1:64) and the father's genotype is CDe/cde (R^1r), the fetus would have a 50:50 chance of inheriting the Rho (D) antigen from the father]. If the fetus is Rh-negative, the maternal antibodies cannot be harmful. Before fetal blood sampling was available, serial amniocentesis would reveal repetitive Zone 1 ΔOD_{450} levels in an Rh-negative fetus. With a heterozygous paternal genotype, half the fetuses would undergo a single umbilical cord puncture instead of repeated amniocentesis.

Patient concern regarding transmission of acquired immunodeficiency syndrome (AIDS) and hepatitis to the fetus secondary to intrauterine transfusions has resulted in a growing interest in autologous transfusion (23). Blood collected from the mother can be made available for intrauterine transfusion or for exchange transfusion in the Rh-affected fetus after delivery. Autologous transfusion (or autotransfusion) denotes the removal of blood or blood components from an individual for storage and subsequent transfusion back into the donor-patient. In most cases, proper planning with the patient, hospital blood bank, transfusion personnel, and obstetrician can be accomplished without difficulty (24). Autotransfusion eliminates concern over blood-transmitted diseases such as hepatitis, AIDS, and cytomegalovirus. Absolute, continuous donor-patient identification must be maintained from the time of collection to the time of transfusion. Even during pregnancy, predeposit autologous donations may be made at appropriate intervals well in advance of the anticipated need, to permit the reattainment of acceptable hemoglobin levels (25). Proper planning allows one or more units to be collected from most patients. Oral iron therapy permits donations to be made at two-week intervals in many cases. Currently, blood may be stored in the liquid state for up to 42 days, depending on the anticoagulant-preservative used. For frozen red blood cells, the storage time may be extended to as long as seven years. The use of frozen autologous blood facilitates the collection of multiple units and allows the interval between the donations to be increased. Autologous blood donations can also be accomplished prior to pregnancy when the potential need for autologous blood during a future pregnancy is evident.

Washed or deglycerolized autologous red blood cells obtained from the mother may be used for intrauterine fetal transfusion during the third trimester or for exchange transfusion after parturition. ABO blood-group compatibility is essential for transfusion in adults. Owing to the absence of preformed alloagglutinins in the fetus and the newborn, however, ABO compatibility is not mandatory in these cases. The advantages of using autologous red blood cells for intrauterine transfusion may outweigh the need for ABO-compatibility. Because of the presence of clinically significant alloantibodies in the mother's plasma, the autologous red blood cells should be plasma-free (washed or deglycerolized) when used for fetal or neonatal transfusion. If multiple blood-group alloantibodies are present, the availability of compatible blood may be compromised. Autologous transfusion is an accepted alternative to the use of allogeneic (homologous) blood and is a safe form of transfusion. The mother's red blood cells will lack the blood-group antigens that correspond to the clinically significant alloantibodies which may be present.

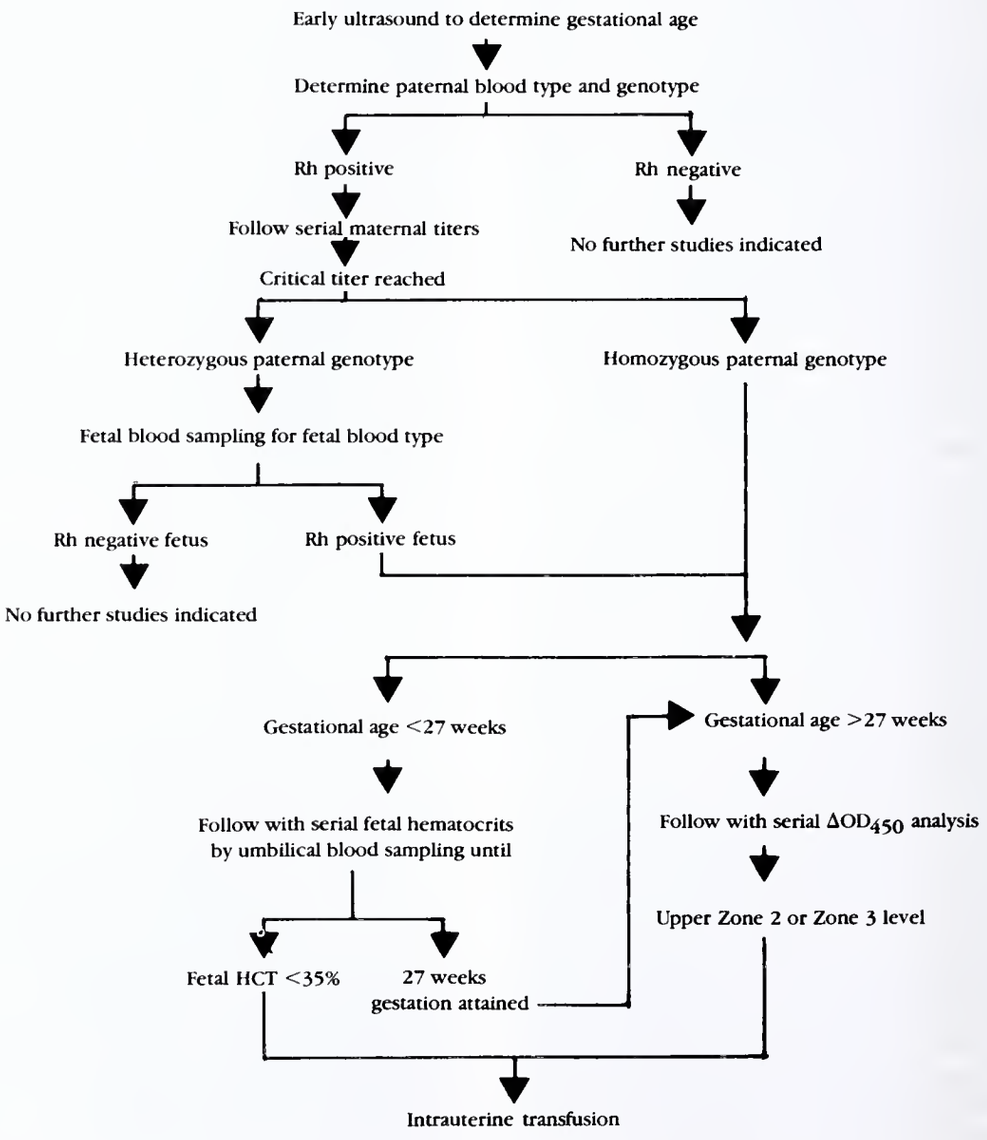
When the mother's red cells are used for intrauterine transfusion in cases of hemolytic disease of the fetus due to alloantibodies other than anti-D and the mother is Rh positive, one should be reluctant to administer the mother's Rh-positive cells to the fetus if the fetal blood type is Rh negative or unknown. In such cases, the likelihood of Rh alloimmunization is not known, but such immunization could conceivably occur after birth if the fetus is Rh negative. The significance of such alloimmunization is greater if the child is female and is later plagued with Rh hemolytic disease of her offspring.

Ultrasound has played an important role in the fetal therapy for Rh disease. This method's use in the assessment of gestational age is instrumental in age-dependent aspects of treatment. Ultrasound has also enabled fetal blood sampling and intravascular transfusions to become a reality. Although some authors have advocated the use of serial ultrasound examinations to detect signs of impending hydrops (26), recent studies have shown that umbilical vein diameter, intrauterine volume, placental thickness,

and fetal abdominal circumference are not reliable predictors of deterioration of the fetal hematocrit (22). A predictable sequence of events leading to the development of overt hydrops has not been noted with serial studies of the fetus. Some fetuses will first develop a pericardial effusion while others will initially develop ascites. Recent work by Vintzileos (27) has shown that serial liver measurements *may* be predictive of increasing severity of fetal hemolytic disease. Finally, Doppler determinations of the blood velocity in the fetal abdominal aorta have been closely correlated with fetal hematocrit (28).

The future treatment of Rh alloimmunization will probably involve the immunologic aspects of the disease process. Oral administration of promethazine (29) and Rh-positive red cells (30) has been attempted in an effort to prevent maternal antibody formation, but both of these approaches have met with questionable success. Studies concerning the use of plasmapheresis to remove maternal antibodies have produced conflicting results (31). Immunologic blockage of antibody transfer across the placenta is one potential area for future research. Animal research has shown that fetal hematopoietic stem cells can be successfully transplanted into the fetus (32), but the only attempted procedure of this type in a human fetus severely affected by Rh disease was unsuccessful (33).

2. Evaluation and treatment of Rh sensitization.


Early ultrasound to determine gestational age
Determine paternal blood type and genotype
Rh positive
Rh negative
Follow serial maternal titers
No further studies indicated
Critical titer reached
Heterozygous paternal genotype
Homozygous paternal genotype
Fetal blood sampling for fetal blood type
Rh negative fetus
Rh positive fetus
No further studies indicated
Gestational age <27 weeks
Gestational age >27 weeks
Follow with serial fetal hematocrits by umbilical blood sampling until
Follow with serial ΔOD450 analysis
Upper Zone 2 or Zone 3 level
Fetal HCT <35%
27 weeks gestation attained
Intrauterine transfusion

In conclusion, we propose the following management scheme for Rh-sensitized patients, based on recent developments in the field (Fig 2):

1. Establish accurate dating by means of early ultrasound examination.
2. Determine the paternal genotype.
3. If there is *no* previous history of an affected child, follow maternal titers at least once monthly. Become familiar with the critical titer value (titer associated with a significant risk of hydrops fetalis) at the laboratory facility being utilized. The critical titer values and methodology for determining of titers will vary between laboratories; titers are generally performed using cells homozygous for the corresponding antigen, if available. A human antiglobulin titer of 16 (dilution of 1:16) is the critical titer used at Baylor College of Medicine in Houston. If the critical titer of a particular laboratory has been reached or exceeded and the paternal genotype is heterozygous, consider referring the patient to a tertiary care center experienced with umbilical cord sampling in order to undergo fetal blood typing. If the fetus is found to be Rh-negative, no further testing is necessary.
4. If the fetus is Rh-positive and the gestational age is greater than 27 weeks, begin amniocentesis for ΔOD_{450} measurements.
5. If the critical titer has been reached or exceeded and the gestational age is less than 27 weeks, consider referring the patient to a tertiary care center for fetal blood sampling in order to determine the fetal hematocrit.
6. If there is a previous history of an affected child, consider referring the patient for fetal blood sampling for hematocrit determination as early as 20 weeks of gestation.
7. If ΔOD_{450} levels are being used, evaluate them every one to two weeks. An initial value in Zone 3 or upper Zone 2 of the Liley curve should prompt a referral to a tertiary care center for fetal blood sampling and probable intrauterine transfusion. If the trend of the ΔOD_{450} has reached a plateau or is rising, the patient should be referred for probable intrauterine transfusion.
8. If patient is undergoing transfusions, administer weekly steroids to enhance fetal lung maturity after 26–28 weeks of gestation.
9. After 26 weeks of gestation, perform weekly electronic fetal monitoring and ultrasound examinations to assess any acute changes in status between transfusions.
10. Consider having the child delivered at a tertiary care facility experienced in neonatal exchange transfusion.

REFERENCES

1. Levine P, Stetson RE: An unusual case of intragroup agglutination. JAMA 113:126–127, 1939.
2. Landsteiner K, Weiner AS: An agglutinable factor in human blood recognized by immune sera for rhesus blood. Proc Soc Exper Biol Med 43:223, 1940.
3. Levine P, Katzin EM, Burnham L: Isoimmunization in pregnancy: its possible bearing on etiology of erythroblastosis foetalis. JAMA 116:825–827, 1941.
4. Wallerstein H: Treatment of severe erythroblastosis by simultaneous removal and replacement of blood of newborn infant. Science 103:583–584, 1946.
5. Liley AW: Liquor amnii analysis in the management of the pregnancy complicated by rhesus sensitization. Am J Obstet Gynecol 82:1359–1370, 1961.
6. Liley AW: Intrauterine transfusion of foetus in haemolytic disease. Br Med J 5365:1107–1109, 1963.
7. Clewell WH, Dunne MG, Johnson ML, et al: Fetal transfusion with real-time ultrasound guidance. Obstet Gynecol 57(4):516–520, 1981.
8. Berkowitz RL, Hobbins JC: Intrauterine transfusion utilizing ultrasound. Obstet Gynecol 57(1):33–36, 1981.
9. Bowman JM: The management of Rh-isoimmunization. Obstet Gynecol 52(1):1–16, 1978.
10. Lewis M, Bowman JM, Pollock J, et al: Absorption of red cells from the peritoneal cavity of an hydropic twin. Transfusion 13(1):37–40, 1973.
11. Rodeck CH, Kemp JR, Holman CA, et al: Direct intravascular fetal blood transfusion by fetoscopy in severe Rhesus isoimmunization. Lancet 1(8221):625–627, 1981.
12. Rodeck CH, Nicolaides KH, Warsof SL, et al: The management of severe rhesus isoimmunization by fetoscopic intravascular transfusions. Am J Obstet Gynecol 150(6):769–774, 1984.
13. Bang J, Bock JE, Trolle D: Ultrasound-guided fetal intravenous transfusion for severe rhesus haemolytic disease. Br Med J 284:373–374, 1982.
14. Rodeck CH, Nicolaides KH: Fetoscopy and fetal tissue sampling. Br Med Bull 39(4):332–337, 1983.
15. Daffos F, Capella-Pavlovsky M, Forestier F: Fetal blood sampling during pregnancy with use of a needle guided by ultrasound: a study of 606 consecutive cases. Am J Obstet Gynecol 153(6):655–660, 1985.
16. de Crespigny LC, Robinson HP, Quinn M, et al: Ultrasound-guided fetal blood transfusion for severe rhesus isoimmunization. Obstet Gynecol 66(4):529–532, 1985.
17. Grannum PA, Copel JA, Plaxe SC, et al: In utero exchange transfusion by direct intravascular injection in severe erythroblastosis fetalis. N Engl J Med 314(22): 1431–1434, 1986.
18. Berkowitz RL, Chitkara U, Goldberg JD, et al: Intrauterine intravascular transfusions for severe red blood cell isoimmunization: ultrasound-guided percutaneous approach. Am J Obstet Gynecol 155(3):574–581, 1986.
19. First International Workshop on Percutaneous Fetal Umbilical Blood Sampling, October, 1986, Philadelphia, Pennsylvania.
20. Rodeck CH: Fetal transfusion, in Queenan JT (ed): Fetal Therapy 1:59, 1986.
21. Niswander KR: Spectrophotometric analysis of amniotic fluid in early gestation. Am J Obstet Gynecol 108(8):1296–1297, 1970.
22. Nicolaides KH, Rodeck CH, Mibashan RS, et al: Have Liley charts outlived their usefulness? Am J Obstet Gynecol 155(1):90–94, 1986.
23. Surgenor DM: The patient's blood is the safest blood, editorial. N Engl J Med 316(9):542–544, 1987.

24. Milam JD: Autotransfusion and transfusion, in Barrett BM Jr (eds): Manual of Patient Care in Plastic Surgery. Boston, Little Brown and Co, 1982, pp 61–68.
25. Autologous blood transfusions. Council on Scientific Affairs. JAMA 256(17):2378–2380, 1986.
26. Frigoletto FD, Greene MF, Benacerraf BR, et al: Ultrasonographic fetal surveillance in the management of the isoimmunized pregnancy. N Engl J Med 315(7): 430–432, 1986.
27. Vintzileos AM, Campbell WA, Storlazzi E, et al: Fetal liver ultrasound measurements in isoimmunized pregnancies. Obstet Gynecol 68(2):162–167, 1986.
28. Rightmire DA, Nicolaides KH, Rodeck CH, et al: Fetal blood velocities in Rh isoimmunization: relationship to gestational age and to fetal hematocrit. Obstet Gynecol 68(2):233–236, 1986.
29. Gudson JP, Witherow C: Possible ameliorating effects of erythroblastosis by promethazine hydrochloride. Am J Obstet Gynecol 117:1101–1108, 1973.
30. Bierme SJ, Blanc M, Abbal M, et al: Oral Rh treatment for severely immunized mothers, letter. Lancet 1(8116):604–605, 1979.
31. Graham-Pole J, Barr W, Willoughby ML: Continuous-flow plasmapheresis in management of severe rhesus disease. Br Med J 1(6070):1185–1188, 1977.
32. Flake AW, Harrison MR, Adzick NS, et al: Transplantation of fetal hematopoietic stem cells in utero: the creation of hematopoietic chimeras. Science 233(4765): 776–778, 1986.
33. Linch DC, Rodeck CH, Nicolaides K, et al: Attempted bone-marrow transplantation in a 17-week fetus, letter. Lancet 2(8521–8522):1453, 1986.

We need someone with the confidence of a surgeon, the dedication of a marathoner and the courage of an explorer.

We need someone to fill a unique job opening.

Someone to spend two years in another country. To live and work in another culture. To learn a new language and acquire new skills.

We need someone who wants to help improve other people's lives. Who's anxious to build lasting friendships. To gain memories and experience that will last a lifetime. And a sense of fulfillment few jobs can match.

We need a Peace Corps volunteer. Interested? The first step is easy. **Call 1-800-424-8580, Ext. 93.**

Peace Corps.

The toughest job you'll ever love.

Ad Council

EMERARDO FALCON, JR, MD
JACK B. ALPERIN, MD
FRANK H. GARDNER, MD

Presurgical gamma globulin in a patient with ITP

Treatment modalities for idiopathic thrombocytopenic purpura (ITP) include prednisone, splenectomy, and immunosuppressive drugs such as cyclophosphamide, azathioprine, vincristine, or vinblastine. Intravenous infusions of immunoglobulin G (IgG) have also been successful in treating selected patients with ITP. This paper describes the use of intravenous IgG to prepare a patient with ITP for a bone graft to correct nonunion of a tibia-fibula fracture. Other forms of therapy for ITP were considered inappropriate.

A 34-year-old small Caucasian man presented with a persistent non-union of a left tibia-fibula fracture. The patient had sustained the fracture following a motor vehicle accident approximately two years before. He had been treated with a fibulectomy and a bone graft. After 16 months, nonunion of the left tibia-fibula fracture persisted, and he was admitted for another bone graft.

He had undergone cholecystectomy and had a history of hepatitis. There was no history of bleeding tendencies or complications. His family history was unremarkable. Medications at the time of admission included methocarbamol and acetaminophen with codeine.

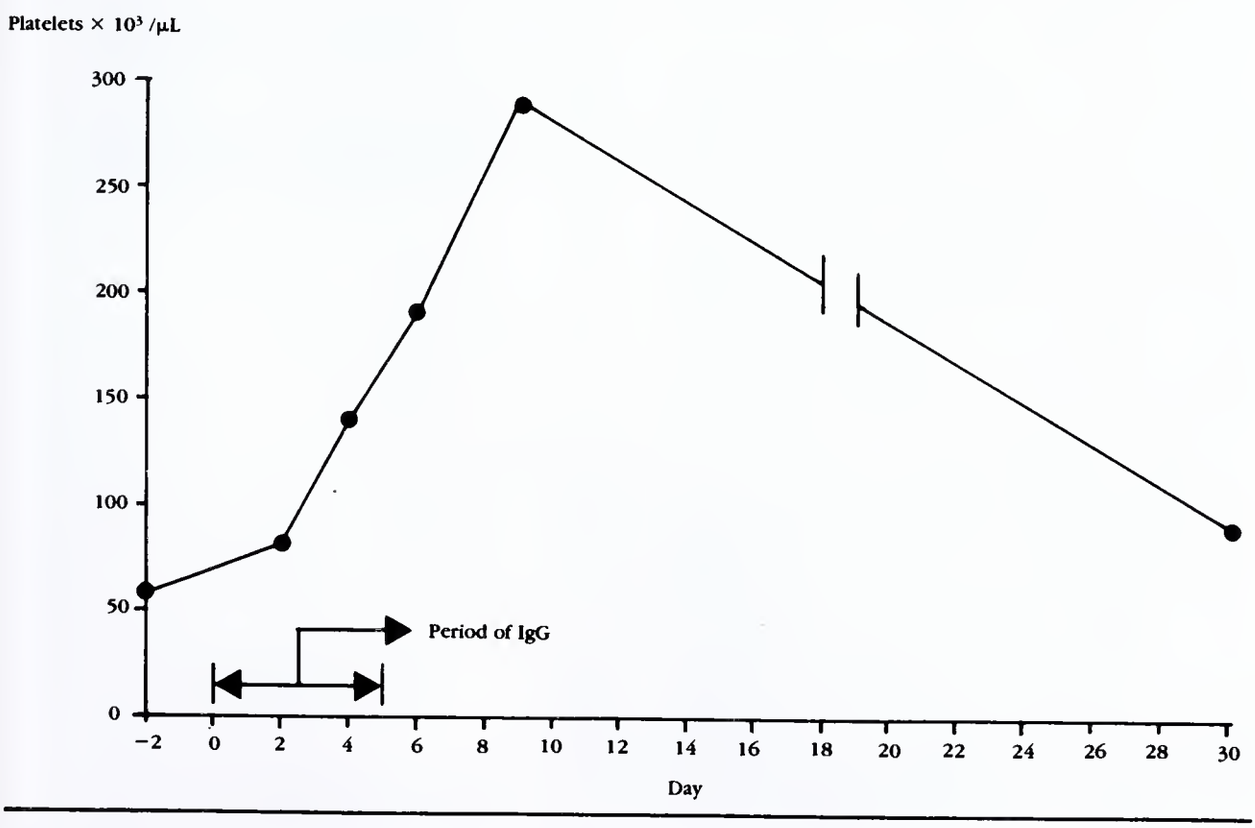
On physical examination all vital signs were normal. His lungs were clear to auscultation, and the cardiac examination was normal. His liver and spleen were not palpable, and there were no palpable lymph nodes or abdominal masses. Examination of his lower extremities showed a shorter left leg with excessive motion at the fracture site and petechiae over the left ankle. Laboratory results included leukocytes 6.3 x $10^3/\mu L$ (6.3 x $10^9/L$), a normal differential count, hemoglobin 16.2 g/dL, hematocrit 46%, and platelets 99 x $10^3/\mu L$ (99 x $10^9/L$). Both the prothrombin and activated partial thromboplastin times were normal.

All medications were immediately stopped. A bone marrow biopsy and aspirate showed a number of megakaryocytes and normal megakaryocytic morphology. The bleeding time measured 14 minutes, 30 seconds in the right arm and 17 minutes in the left arm (normal <9 minutes). Other laboratory results included negative HTLV III antibody test and positive hepatitis B antibody test findings for both surface and core antigens.

The platelet count continued to fall, reaching a low of 68 x $10^3/\mu L$ (68 x $10^9/L$). After excluding

Emerardo Falcon, Jr, MD; Jack B. Alperin, MD; Frank H. Gardner, MD, Division of Hematology/Oncology, Department of Internal Medicine, The University of Texas Medical Branch, Galveston, TX 77550. Send reprint requests to Dr Falcon.

1. Platelet counts for 34-year-old man with idiopathic thrombocytopenic purpura treated with IgG.



other possible causes for thrombocytopenia, a diagnosis of ITP was made. Since other modes of therapy were considered inappropriate, he was treated with IgG, 0.4 g per kg body weight (34.5 g) intravenously extending over six hours, daily for five days. Four days later his platelet count was 134 x $10^3/\mu L$ (134 x $10^9/L$) (Fig 1). The bone graft was then accomplished without complications. The platelet count climbed to 280 x $10^3/\mu L$ (280 x $10^9/L$) by the tenth day after beginning therapy with IgG. One month later the wound was healing well, and the platelets numbered 101 x $10^3/\mu L$ (101 x $10^9/L$).

Discussion

ITP may affect both children and adults. It can be either acute or chronic. Treatment is usually directed towards blocking or removing the site of platelet destruction, the spleen or other sites of the reticuloendothelial system. Prednisone prevents sequestration of damaged or antibody-coated platelets by blocking the phagocytic activity of monocytes/macrophages in the reticuloendothelial system (1,2). Steroids are usually the initial or primary form of therapy for ITP; however, they have various side effects including bone destruction. If steroids fail, removal of the spleen, the major site of sequestration, is indicated (2,3). Splenectomy is helpful in some, but not all patients with ITP, and there is the risk of a general anesthetic as well as an increased risk of infection.

The use of immunosuppressive drugs (eg, cyclophosphamide or azathioprine) for treating ITP has been reserved for patients refractory to steroids or splenectomy (1,2). Both drugs have been used alone or in combination with steroids with reports of good to excellent results. Several months of immunosuppression treatment are necessary for improvement of the platelet count (1,2). Vincristine and vinblastine given intravenously have also been used to treat patients with ITP refractory to other modes of therapy. They can be given alone or as platelet-loaded transfusions. Both forms of therapy have been reported to improve platelet counts within hours to days (4–6).

The immunoglobulin content of intravenous IgG includes at least 90% intact monomeric IgG_1. Exactly how IgG effects a rise in the platelet count is not known (2,7). It has been postulated that high doses of IgG may overload and block the reticuloendothelial system (7). High-dose IgG therapy has been used with success in children and adults with acute and chronic ITP (7,8). Adults with ITP after splenectomy exhibit a better response to intravenous IgG than patients who have not undergone splenectomy (8). Our patient showed an improvement in platelet count within three days of initiating IgG therapy and exhibited a peak platelet count after 11 days of therapy. This response is similar to the response to high-dose IgG previously reported (7,8). There is generally a decrease in the platelet count about four weeks after onset of IgG therapy.

The goal of our therapy was to raise the platelet count to a level sufficient to maintain hemostasis, not to obtain a normal platelet count. We selected high dose IgG because other modes of therapy were considered inappropriate. The success of IgG in this patient, as well as others with ITP, indicates this form of therapy is an acceptable alternative. This is especially so for patients for whom other modes of therapy are contraindicated.

REFERENCES

1. Karpatkin S: Autoimmune thrombocytopenia purpura. Blood 56(3):329–343, 1980.
2. Luiken GA, McMillan R, Lightsey AL, et al: Platelet-associated IgG in immune thrombocytopenic purpura. Blood 50(2):317–325, 1977.
3. Williams WJ: Hematology, ed 3. New York, McGraw-Hill, Inc, 1983, pp 1317–1340.
4. Ahn YS, Harrington WJ, Seelman RC, et al: Vincristine therapy of idiopathic and secondary thrombocytopenias. N Engl J Med 291(8):376–380, 1974.
5. Ahn YS, Byrnes JJ, Harrington WJ: The treatment of idiopathic thrombocytopenia with vinblastine-loaded platelets. N Engl J Med 298(20):1101–1107, 1978.
6. Nenci GG, Agnelli G, De Cunto M, et al: Infusion of vincristine-loaded platelets in acute ITP refractory to steroids: an alternative to splenectomy. Acta Haematol (Basel) 66(2):117–121, 1981.
7. Imbach P, Barandun S, d'Apuzzo V, et al: High-dose intravenous gammaglobulin for idiopathic thrombocytopenic purpura in childhood. Lancet 1(8232):1228–1231, 1981.
8. Schmidt RE, Budde U, Schafer G, et al: High-dose intravenous gammaglobulin for idiopathic thrombocytopenic purpura, letter. Lancet 2(8244):475–476, 1981.

Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance $\leq$10 ml/min/1.73/m^2.

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709

IMPROVING LIVES THROUGH ANTIVIRAL RESEARCH

BURROUGHS WELLCOME CO

Copr © 1986 Burroughs Wellcome Co All rights reserved 86-ZOV-5

NICOLA PERONE, MD

Spontaneous regression of tubal pregnancy: current considerations

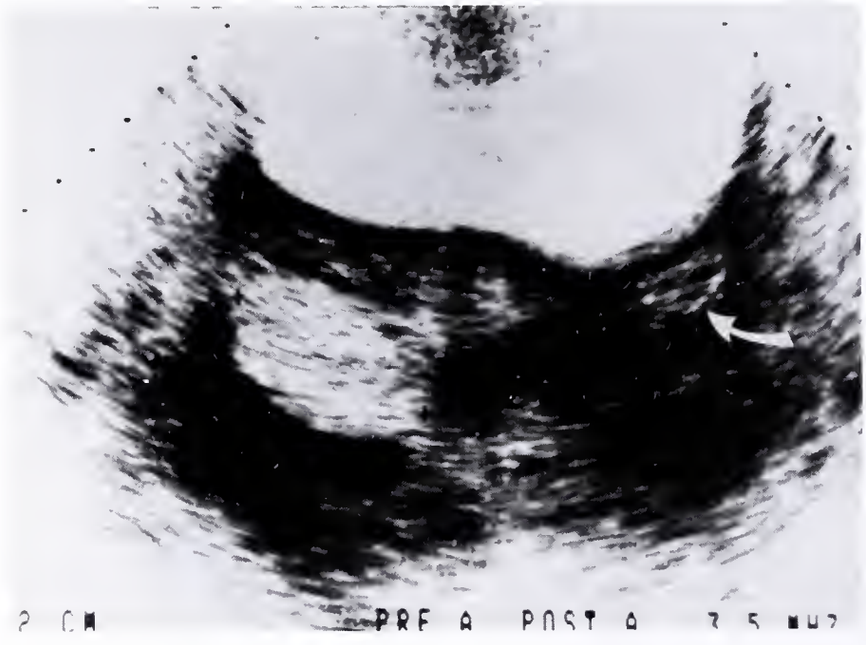
Nicola Perone, MD, Clinical Associate Professor, Department of Obstetrics, Gynecology, and Reproductive Sciences, The University of Texas Health Science Center, Texas Medical Center, Houston. Send reprint requests to Dr Perone at 150 W Parker Rd, Suite 604, Houston, TX 77076.

The natural history of ectopic pregnancy includes, in addition to tubal rupture, abortion or gradual disintegration of the tubal wall, spontaneous regression with degeneration of the conceptus within the tubal lumen. The combined use of sonography and serial β-HCG levels has improved our ability to document this latter outcome. A case of "silent" tubal pregnancy, fortuitously found, is reviewed. The pathogenesis and diagnosis of this form of ectopic pregnancy are briefly discussed along with the therapeutic implications.

Tubal pregnancies are generally expected to undergo rupture or abortion with a resulting acute clinical picture directly related to the hemoperitoneum. The effects of the severe hemodynamic insult generally offer the diagnostic clue to the suspecting physician, particularly in patients at risk who present with irregular menstrual history, vaginal spotting, and the objective finding of a pelvic mass.

Another possibility, however, is that the trophoblastic tissue will cause gradual disintegration of the tubal wall, with a resulting walled-off hematoma around the product of conception or moderate, intermittent bleeding. Such cases, characterized by mild ache or cramping and a limited hemodynamic insult, have been called chronic ectopic pregnancy (1).

An even more elusive occurrence among the protean manifestations of a tubal pregnancy is its almost asymptomatic, spontaneous regression, with the degeneration of the conceptus within the tubal lumen. This eventuality, by analogy with a similar one in eutopic pregnancy, may be referred to as missed tubal abortion. This report calls the attention to this latter outcome.



1. Transverse scan of the pelvis showing a large cystic mass on the right side and a smaller (arrow), echoic complex on the left adnexa, with scant non-echoic areas, representing the missed tubal abortion.

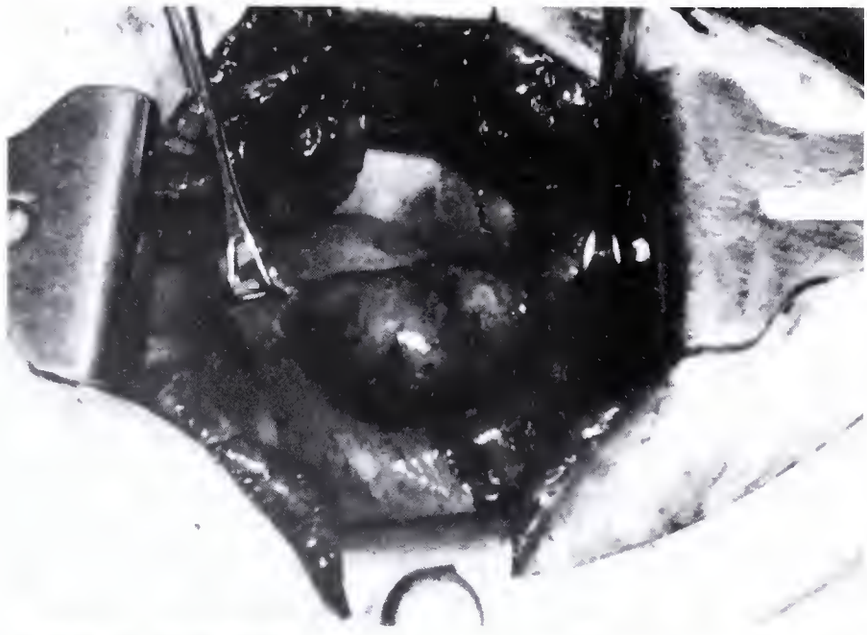
Case report

A 23-year-old patient (gravida 2 para 2) was admitted to the hospital on Feb 27, 1985, complaining of secondary amenorrhea (her last menstrual period was reported in September of 1984). The patient was seen in consultation March 1, 1985, following the sonographic diagnosis of a cyst on the right adnexa. A review of the sonogram (Fig 1) revealed, in addition to the right ovarian mass, a small, dominantly echoic complex on the left adnexa, with scant non-echoic areas. On admission, laboratory findings were normal, and pregnancy test was reported negative. The operative findings included a large right corpus luteum hemorrhagicum and an area of swelling approximately 3 cm in diameter in the left tube in its ampullary segment (Fig 2). Because of the patient's desire for permanent sterilization, a left salpingectomy was done, in addition to a right salpingo-oophorectomy. The resected tube on pathologic examination was found to contain loose fibrous tissue and degenerated remnants of placenta villi (Fig 3), consistent with the diagnosis of tubal missed abortion.

Discussion

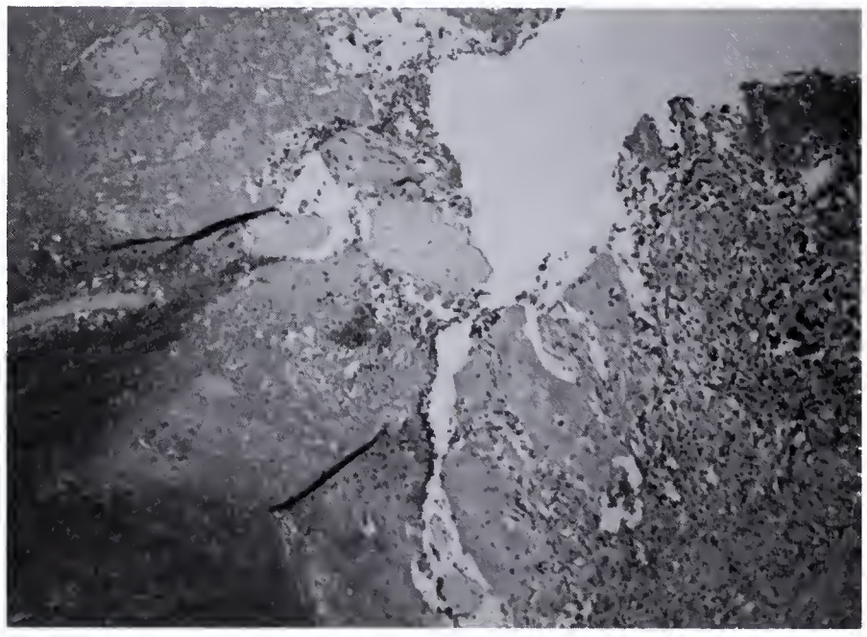
The possibility of spontaneous regression of tubal pregnancy with retention of the products of conception has received little attention in the literature (2). As for the pathogenesis of this form of tubal pregnancy, one could speculate that the occurrence of only moderate bleeding may cause partial separation of the ovum, with retention within the tubal lumen of the non-viable pregnancy. This is in contrast with complete tubal abortion, in which heavy bleeding, following the erosion of a large vessel by the trophoblast, causes separation of the ovum from the tubal wall and its extrusion through the fimbrial end. Minimal hemorrhage, in cases of missed tubal abortion, could be the result of poor vascularization at the implantation site. The absence of a large vessel is likely, in fact, if implantation occurs in the antimesenteric side of the tube. The mesosalpingeal vessels, representative of combined ovarian and uterine blood supply to the tube, generally form anastomotic vascular arches along the mesenteric side of the tube, with only small branches arising from them, to encircle the tubal walls. In advanced cases, retention of the conceptus may be the result of its larger size, even when the connection between the ovum and the tubal wall has been totally severed. The ability of the tube to expand sufficiently to contain an enlarging fetus without rupturing has been well documented (3).

2. The missed tubal abortion as observed at laparotomy.



The diagnosis of tubal missed abortion is generally fortuitous, as in this case. In patients at risk for ectopic pregnancy, however, it may be possible to uncover the spontaneous resolution of a tubal pregnancy as it occurs. Following a menstrual delay and a positive pregnancy test, sonographic evaluation of the uterus may be expected to reveal the absence of a gestational sac. Caution is clearly indicated to avoid confusion with a ring-like echoic area, known as pseudo-gestational sac, representing blood or fluid collection within the uterine cavity, which could lead to the erroneous diagnosis of intrauterine pregnancy.

Lack of a uterine gestational sac, coupled with a beta-human chorionic gonadotropin (β-HCG) level above the discriminatory zone (4), should alert the physician that he or she may be dealing either with an abnormal, yet eutopic pregnancy, such as a missed abortion, or with an ectopic pregnancy. Occasionally the distinction may be made through a more meticulous scan of the pelvis with the demonstration of a gestational sac in unequivocal extrauterine location. Sources of error, however, could be the presence of a follicular cyst (more sharp definition between wall and fluid) or of a corpus luteum cyst associated with an intrauterine pregnancy (generally larger in size). When the adnexal sonographic findings are inconclusive, as is often the case, a curettage, showing decidual rests with no chorionic villi, will be all that is needed to confirm the suspicion of an ectopic pregnancy. If indeed the currettage specimen implies ectopic pregnancy, the differential diagnosis between a growing, yet unruptured, tubal pregnancy and one that is undergoing silent reabsorption may be accomplished through serial quantitative β-HCG assays. A "classic" tubal pregnancy, with progressive growth of the fertilized ovum within the lumen leading to the inevitable rupture or abortion, will show increasing levels of β-HCG, although less rapidly than those seen in cases of eutopic pregnancy; in the case of a tubal pregnancy, in which the conceptus is undergoing degeneration, static or falling levels will be reported (5). As for the treatment, when a spontaneous resolution is apparent, close monitoring of the patient with informed consent in a hospital with available blood may be undertaken. Intervention at a later date to repair the tube is indicated, if on follow-up examination by hysterosalpingography or by laparoscopy with hydrotubation the involved tube is found blocked. The incidence of tubal blockage following expectant management is not known and whether the trophoblastic tissue left within the tube may lead to further adhesion formation remains a matter of debate. When attempting to restore tubal function, the choice between linear salpingotomy and segmental resection is generally empirical. However, recent observations on the histopathologic changes brought about by the tubal pregnancy (6) seem to suggest that a linear salpingotomy is better suited for an ampullary pregnancy, which in most instances grows in an extratubal location, leaving the tubal lumen fairly intact. On the other hand, segmental resection may be more appropriate with an isthmic pregnancy, whose growth is predominantly intraluminal, resulting in extensive destruction of the endosalpinx (7). The selection of the conservative approach will, in all probability, remain a matter of debate until more insight is gained into the pathology of tubal pregnancy, leading, possibly, to our ability to ascertain at



3. Fallopian tube with a necrotic villus in juxtaposition to the wall of the tube, where histiocytic response is noticeable.

the operating table the predominant growth pattern in any given case (8).

Whether the use of methotrexate to further induce reabsorption in cases of ectopic pregnancy undergoing spontaneous resolution would effectively improve patients' future fertility, thus avoiding tubal repair, is unclear, given the limited experience with such an approach (9).

When the finding of a missed tubal abortion is incidental and fertility is not an issue, as in this case, ablative treatment is justified.

Conclusions

It has been estimated that 50% of all ectopic pregnancies are not recognized and resolve spontaneously (10). Our improved ability to document such cases may explain at least in part the apparent increasing ectopic pregnancy rate. The possibility of spontaneous resolution of a tubal pregnancy, furthermore, offers the theoretical justification for the nonoperative treatment in selected cases, more convincingly advocated since quantitative serum β-HCG assays have become available. It is generally agreed that the point of watchful expectancy should not be to avoid surgery, but to better determine which patients require surgery and which do not (11).

REFERENCES

1. Cole T, Corlett RC Jr: Chronic ectopic pregnancy. Obstet Gynecol 59(1):63–68, 1982.

2. Burrows S, Moore W, Pekala B: Missed tubal abortion. Am J Obstet Gynecol 136(5):691–692, 1980.

3. Avery DM, Silverman JF, Mazur MT: Retained fetal bones in chronic tubal pregnancy. Am J Obstet Gynecol 149(7):794–795, 1984.

4. Kadar N, DeVore G, Romero R: Discriminatory HCG zone: its use in the sonographic evaluation for ectopic pregnancy. Obstet Gynecol 58(2):156–161, 1981.

5. Adoni A, Milwidsky A, Hurwitz A, et al: Declining β-HCG levels: an indicator for expectant approach in ectopic pregnancy. Int J Fertil 31(1):40–42, 1986.

6. Budowick M, Johnson TR Jr, Genadry R, et al: The histopathology of the developing tubal ectopic pregnancy. Fertil Steril 34(2):169–171, 1980.

7. DeCherney AH, Naftolin F, Graebe R: Isthmic ectopic pregnancy: segmental resection and anastomosis to conserve fertility. Fertil Steril 41(2):45S–46S, 1984.

8. Pauerstein CJ, Croxatto HB, Eddy CA, et al: Anatomy and pathology of tubal pregnancy. Obstet Gynecol 67(3):301–308, 1986.

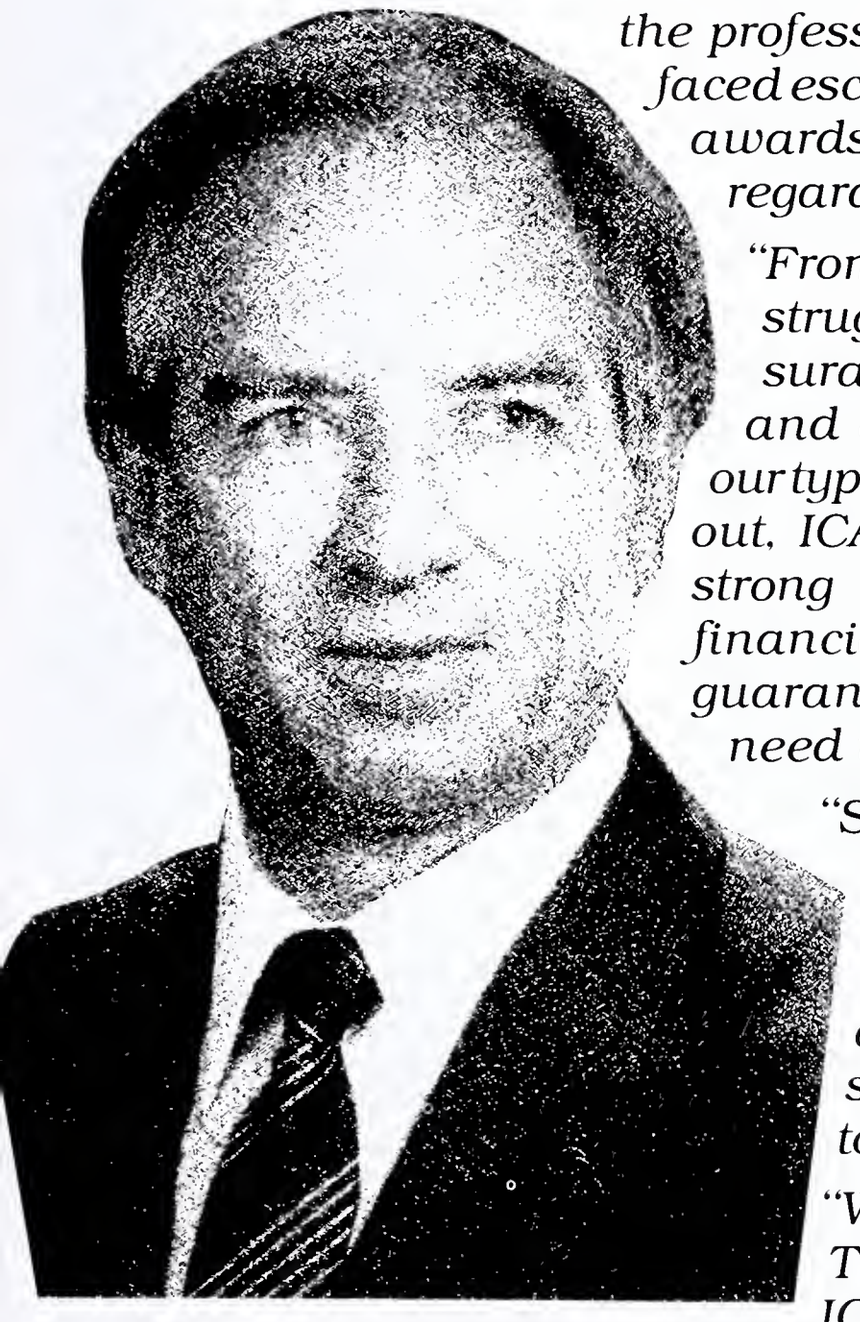
9. Ory SJ, Villanueva AL, Sand PK, et al: Conservative treatment of ectopic pregnancy with methotrexate. Am J Obstet Gynecol 154(6):1299–1306, 1986.

10. Woodruff JD, Pauerstein CJ: The fallopian tube: structure, function, pathology, and management. Baltimore, Williams and Wilkins, 1969, pp 182–236.

11. Mashiach S, Carp HJ, Serr DM: Nonoperative management of ectopic pregnancy. A preliminary report. J Reprod Med 27(3):127–132, 1982.

give five.
What you get back is immeasurable.
Just five hours a week. Just 5% of your income. It's not much to give, to the causes you really care about. But that small investment could change somebody's life. And it's hard to imagine a better return than that.
INDEPENDENT SECTOR
Ad Council

"We Understand Your Frustration."



DOYLE N. ROGERS, MD, FCAP, JD
Chairman, President, CEO

"You don't need to be told how tough the last few years have been in the professional liability arena. You've faced escalating premiums, escalating awards and escalating frustrations, regardless who insures you.

"From our side of the table, we've struggled with diminishing reinsurance, exhorbitant claims costs and an industry-wide change in our type of insurance policy. Throughout, ICA has strived to maintain a strong balance sheet, because our financial stability is your only real guarantee that we'll be here if you need us.

"So, we made tough and sometimes, unpopular, decisions. But the bottom line is this: We've positioned ourselves as a strong force in the professional liability business, for today and tomorrow.

"We'll be here if you need us. That's what we both want. At ICA, we're committed to protecting your practice."

ICA
INSURANCE
CORPORATION
OF AMERICA

Houston, Texas (713) 871-8100
The Professional Liability Specialist

LOLLY BEAIRD, PhD, RN

Winning with medical review

Lolly Beaird,* PhD, RN, Consultant, Health Care Administration, 1516 Panther Loop, Pflugerville, TX 78660.

There is a tension "to act" and "not to act" on medical practice quality of care and utilization issues. Physicians are at the center of this tension—all subject to review and possible action by a variety of agencies. The goal of this article is to help physicians promote quality of care and appropriate utilization and to avoid the potential of being singled out for corrective action or other discipline. This article promotes a strategy for winning. The strategy includes a team effort to learn the rules of review, to anticipate the questions, and to maximize the effectiveness of responses and appeals.

There is a "tension" in health care regarding the evaluation of and action taken on physicians. Both federal and state officials have taken action to establish stringent means for evaluating medical practice and for assuring that disciplinary action is taken and information is shared when indicated and in the best interests of the public.

When action on substandard medical practice is *not* taken, the public, the news media, elected officials, and many concerned professionals generate pressure to act. This pressure comes in the form of federal and state legislation, investigative reporting, special task forces and resolutions at professional meetings, and consumer complaints. When action *is* taken, whether it is by the hospital, the professional society, the Texas Medical Foundation (TMF), the federal government, or the Texas State Board of Medical Examiners (TSBME), there is likewise pressure not to act. The public, many physicians, and the elected officials want action taken to correct poor medical practice, but no matter where or when it is taken, there are individuals and groups who protest. It is in the context of this tension that review of medical care becomes most important.

Granted, the complexity of medical practice and the legal constraints with which we live provide us with *no* review or enforcement system that is without potential fault or error. We should develop and coordinate effective, consistent, and above all, fair systems for the review of health care. The systems must provide for due process, arrive at the best possible determinations, allow opportunity for the problems to be resolved in the least restrictive mode, and ultimately take appropriate definitive action when necessary to protect the public.

At the heart of this tension is the physician. The great majority of physicians seek to keep their knowledge and skills updated and to practice not only reasonable, safe medicine, but excellence. It is well known that a large portion of the professional liability claims are found to be without merit. Of the over 28,000 physicians subjected to review by the TMF, only 23 have been referred to the Office of the Inspector General, and about 100 have been placed on corrective action by TMF. For fiscal year 1986, TSBME received 1,016 complaints, and 70% were closed for lack of jurisdiction or, after investigation, for lack of evidence of a violation of the Medical Practice Act. Virtually all physicians are affected by these review procedures; most improve their practice as a result of review, and only a few are found to represent a threat to the public.

Consumers as well as health professionals should realize that to have cases referred for committee or TMF review or to be investigated by the TSBME is part of the checks and balances and is not in and of itself a finding of guilt. Such investigations should be accepted as a valid and routine process to assure the public of quality health care.

Background on medical review

When Medicare was implemented in 1965, the incentives were to admit patients whenever possible, do as many procedures and treatments as possible, and keep them in the hospital for extended periods of time. The incentives under the Prospective Payment System (PPS) for Medicare, instituted in 1984, are to admit patients only when medically necessary (services or treatments could not be safely provided in another setting for that patient), reduce the length of stay, and use ancillary services only when essential. The anticipated and actual effect is a tendency to discharge a patient before the patient is stable, to readmit patients for additional treatment that could have been provided in one admission, and to withhold needed services and treatments that would add to the institutional costs of care. Thus, the economic incentives affect the quality of care. On the other hand, when quality of care incentives are imposed, physicians and institutions must find means of providing needed services at an acceptable quality of care and within the economic constraints. Therein lies the challenge. The changes in incentives do not need to have a negative effect on medical care if the physicians and other review team members apply a strategy for winning.

How medical review works

A medical review program can be designed to fulfill various purposes. A quality review program may be designed to evaluate care given to particular patients or to affect the liability of the institution. A utilization/quality review program may be designed to maximize services or to meet requirements of an accrediting or controlling (ie, funding) agency.

*The author has served on the staff of the Texas Medical Foundation and the Texas State Board of Medical Examiners.

CONFIDENTIALITY
The program must assure confidentiality for both the patient and the physician. Control of information is important in protecting the integrity of the program and in making it an acceptable and constructive tool. Only persons able to maintain confidentiality should participate in review programs.

REVIEW PARTICIPANTS
The persons involved in review must be qualified for the type of review being conducted and must have the knowledge and skill to use the criteria and standards. The reviewers must be able to function as team members and work closely with the physicians involved in medical judgments and in setting and adjusting the criteria. If the team members are not able to make objective determinations, then outside review resources may be needed to provide greater objectivity.

PEER REVIEW AND DIALOGUE
In a review program, the final decisions regarding quality of care must be made by peers of those being evaluated. The peer review process must provide for constructive, information-seeking dialogue, whether in writing, by telephone, or face to face. The purpose of the dialogue is to validate a potential problem or to determine the nature and extent of the problem. In many instances, calling a documented problem to the attention of the physician will result in correction of the problem. A follow-up is essential to the evaluation of the effectiveness of peer intervention.

ADMINISTRATION
The administration must provide the resources and time for an effective review program to be developed and maintained. The return on the investment can be measured by the dollars saved, staff morale, and measures of improved quality of care. The administration should expect and receive progress and strategy reports documenting efforts of the review team. The administration should be willing to pursue issues identified by the review team to seek additional interpretation of the rules and possibly some relief in more complex situations.

CONSULTANTS
Consultants on quality and utilization review can complement the staff and provide expertise on methods and problem solving. Selective use of consultants can result in considerable savings in time to get an effective review program underway.

NURSING STAFF
The nursing staff has tremendous impact on how care is provided, coordinated, and documented. The review team should involve the nursing staff in the review process to gain their understanding, cooperation, and involvement in winning strategies. The nursing staff provides expert skill in screening records, particularly for quality of care.

MEDICAL RECORDS STAFF
The medical records staff is responsible for preparing the record for billing, which includes diagnosis and procedure coding, and for assuring that the record is complete and appropriately documented. The medical records staff has a key role in coordinating the medical record review and in being sure that the review program is timely and responsive.

Rules and strategies of the game
The rules of the medical review game vary according to the type of review. An internal review program may define the criteria and rules that must be specific and appropriate to accomplish the goals of the review. Various accreditation guidelines are a good source for developing a review program for specific settings such as ambulatory care, outpatient services, and specialized services. The review program must provide for team members to have copies of the rules and share in discussion of their applications and interpretations.

In order to plan the strategies for winning with medical review, the review team must *interpret* the rules. Sources of information and interpretation include the agency reviewer staff, physician reviewers, and other agencies subject to the same or similar reviews. The rules of the review are generally focused on controlling certain types of admission and treatment behaviors (to control costs) and on detecting inappropriate or substandard practices. The team must *anticipate* the factors that will result in review and/or referral. The players must then establish a review strategy. The review team must know ahead of time which types of cases may not meet the screening review criteria. The team must *take appropriate action* to reduce the number of records which will not meet the screens. Team members must recognize that there will be many legitimate admissions that will not meet the screens and that will be referred for physician peer review. Those records should be well documented ahead of time—at the time the care is delivered—so that the physician reviewer will be able to recognize the thought process of the care providers, the unique circumstances of that patient, and why the care providers felt that the hospitalization was indicated. The team should *be prepared to lose a few*, because the nature of the medical review-peer review system is that two highly qualified and knowledgeable health professionals may have a difference of opinion regarding care. A difference in judgment is a benefit of the peer review system, rather than a shortcoming. The alternative is that the component

of peer review may be lost and an arbitrary system installed in its place.

When a denial of an admission occurs, the record itself will help the team determine what factors were instrumental in the denial decision. Often, the problem is one of *failure to document* the level of care provided, rationale for the care plan selected, extenuating circumstances (eg, needs, abilities, or resources of the patient), or the reasons why the care for that patient should not be provided in an alternate setting.

Review programs provide for an appeals system. A decision can be reconsidered and, based on the merits, may be overturned. Those affected by review should *know the rules* and time frame for the various appeals and use those options selectively. They should be familiar with which party (the hospital, physician, and/or patient) may appeal at various levels and how to process appeals at each level.

Playing to win

There are several basic points to consider in developing the strategy to win with medical review. Some of the strategies are focused on those providing care, generally physicians, nurses, and social workers, while others refer to the whole team communicating and working together to win. The following options are points to consider in planning the winning strategy.

WORK WITH THE REVIEW SYSTEM

Physicians and review team members must agree to accept the concept of review and expend energy in working with the system rather than resisting it. Review will not disappear and, in fact, is expected to increase in scope and focus. If the physicians are resisting the new incentives, then unnecessary admissions and extended lengths of stay may continue and override the efforts of the review team. When the physicians involve themselves in dialogue with the physician reviewers and seek clarification on what the parameters for exceptions are, they can be effective in evolving successful approaches.

WORK THE SYSTEM TO BENEFIT THE PATIENT

Physicians and others in direct contact with patients and the public have an important role in communications. The public must receive a clear message that the rules for hospitalization have changed, but that quality care can be provided using alternatives when indicated. It is easier for patients to accept the new rules if they know that their physician and other care providers understand the system and will negotiate it to their best interests and needs. Ultimately that approach may reduce the pressure that patients and their families put on physicians to utilize more costly methods of treatment. The message is that care providers and third-party reimbursers are ultimately concerned that all patients receive care that is medically necessary, provided in the appropriate setting, and of professional quality.

PROMOTE ALTERNATIVES TO ACUTE CARE

Physicians should be familiar with and support the development of various alternatives to existing services. Alternative services may provide for diagnostic workups and treatment that can be done in other than an acute care setting. Health care providers must be innovative and maximize the possibilities of what can be offered in the community.

PARTICIPATE IN RECORD REVIEW

Not all physicians are effective in record review but should at least get a feel for what is considered when reviewing records. Each medical staff should identify physicians who are adept at record review and support their participation in review. Physicians must be willing to review one another and likewise be receptive to the feedback given by the reviewer. If the medical staff members determine that they are not able to objectively review one another, then they should secure outside physician review. This action will reduce stress within the medical staff and may provide a better quality of record review.

KNOW THE DRGS AND CRITERIA

The physician should accurately and appropriately document the patient's need for acute care at each point in time. Document clear and honest assessments when the patient is ready to be discharged or transferred to a less intense care setting. This documentation is particularly important should the patient be readmitted for any reason and the question of "premature discharge" is raised. Lengths of stay both *less than and greater than* the average length of stay for the DRG must be justified and well documented. If the extended length of stay is not needed, then the physician should discharge the patient or arrange for the patient to assume responsibility for the costs of continued hospitalization.

The screens are not standards of care, but rather are markers to identify those cases that *might* present problems. The physician should anticipate the questions a nonphysician reviewer will be asking and anticipate the questions that a physician reviewer will be asking in order to make a sound determination on the case. Information should not be withheld to leave reviewers guessing; instead, as much information as is reasonable should be provided. This effort at the time the patient is in the hospital is much less burdensome than trying to recall the circumstances and details relating to the case retrospectively.

DOCUMENT TO SUPPORT CARE NEEDS

Medical record reviewers cannot read what is not

documented nor can assumptions be made. The physician must document the medical thought process, including the rationale for *not* taking the usual or expected approach. For example, when a nonaggressive approach has been agreed to by the patient and appropriate family members, those decisions should be documented. Relevant information previously obtained from the patient through office practice is also appropriately added to the medical record. The review team must anticipate that each record will be reviewed by a nonphysician screener and possibly a physician who will not have the benefit of examining the patient and taking a history.

TIMELY RESPONSE TO POSSIBLE DENIALS

The review team must respond promptly when a record is identified as incomplete or is denied or otherwise fails to pass the review screens process. The physician with others on the team should carefully consider the record and provide the additional pertinent information. The medical records staff facilitates the drafting of the response in a timely fashion. For PRO denials, if the deadline for responding to the "potential denial" is missed, and the review team believes additional information might reverse the pending denial, then that information should be drafted and coordinated with the hospital to request a reconsideration within the allotted time frame.

NURSING COORDINATION OF CARE

The nursing staff can control the length of stay for many patients by planning for and scheduling nursing care, tests and treatments, by prevention and early detection of complications or adverse effects, and by discharge planning. Astute observation and documentation by the nursing staff are important to the quality of care received and for record review. Nursing documentation of the level of care needed and received by the patient is important information for reviewers. The nursing staff should apply discharge screens to each patient to assist the physician in making the best decision for the patient and for the hospital and in documenting rationale for the decision made. The discharge screens of the TMF may be useful in this effort.

MEDICAL RECORDS SCREENING RECORDS

The medical records department must establish and maintain a thorough record review system, which includes a screening procedure to identify adequacy of documentation and completion of the record, and make sure the record is ready for review. This process includes validation of the principal diagnosis using documentation in the record and advising the physician of the findings. The physician's attestation for the diagnoses and treatments rendered must be supported by the documentation in the record. The medical record staff must apply the conventions for coding and sequencing in preparing the record for billing purposes. Using a "DRG grouper" to identify the higher-paying codes as the basis for coding is not cost effective in the long run. Basing coding on other than the documentation in the record is referred to as "DRG creep." The practice is both unprofessional and illegal and in the long run can be expensive. Patterns of such practice will be identified eventually in the PRO review process and the hospital will be reprimanded. The coding sequencing rules are constantly being updated and adjusted, so personnel must subscribe to written reports on those changes and participate in workshops and conferences regularly. *Coding Clinics*, published by the American Hospital Association, is a good source of current information.

SPEAKING OUT ON PROBLEMS WITH REVIEW

The review team strategy to win must involve participation in the changing rules of the game. When the rules as applied are shortchanging hospitals and/or withholding needed benefits to patients, then the review team should coordinate with the administration and others to correspond with the appropriate authority stating the rules, how they are applied, and why they need to be modified. The recommendation to modify rules should also suggest ways to meet the needs of the situation and still fulfill the goals of review, which are to provide safe, effective, appropriate, and economical health care.

Summary

The review team must know the rules, know the intent of the rules and their interpretations, then plan and test strategies. The review team must anticipate the review, analyze losses and gains, use appeals selectively and appropriately, and adjust the strategic plan to maximize wins.

Time and effort are more effectively spent on bringing the agency, physician, nursing, record management, and billing practices in line with current review guidelines. Fighting the system is a no-win option. To win with medical review, the review team must know the rules and use a strategic plan that is efficient and effective in winning.

ACKNOWLEDGMENT

Adapted from "Winning with medical care review," Texas Health Law Reporter 3(Dec):1986.

GIVE SMOKING
A KICK IN THE BUTT.
If you can quit smoking for just *one* day, you could kick the habit
for life. Join the Great American Smokeout this November 19.
And kick smoking right out of your life.
Great American Smokeout / Nov 19
AMERICAN CANCER SOCIETY®

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Iatrogenic Creutzfeldt-Jakob disease. Elizabeth B. Rappaport, MD. American Academy of Neurology, *Neurology,* vol 37, September 1987, pp 1520–1522.

Over the past two years, Creutzfeldt-Jakob disease (CJD) has affected several patients who received cadaver pituitary-derived growth hormone (pit-hGH) and one patient who received a cadaveric dura mater graft. The risk of iatrogenic transmission of CJD has long been recognized, but until recently, the low prevalence of the disorder and minimal use of therapeutic products derived from human tissues may have limited the risk. From 1963 to 1985, approximately 10,000 children received pit-hGH. These patients, exposed to pooled products potentially contaminated with the CJD agent, may have significantly increased the number of individuals whose blood and tissues could transmit CJD. This possibility as well as data on the pathophysiology of CJD and scrapie, a related disease of animals, should guide the development of practices that would limit iatrogenic spread of CJD.

Special report: transfusion risks. Richard H. Walker, MD. American Society of Clinical Pathologists, *American Journal of Clinical Pathology,* vol 88, 1987, pp 374–378.

The benefits of blood transfusion must be considered and evaluated in terms of risk factors relating to the adverse effects of transfusion. Transfusions may result in either serious or troublesome complications. Although the risk of transfusion-associated acquired immune deficiency syndrome (AIDS) is of paramount concern in the patient population, it has been virtually eliminated because of testing of donor units for antibody to human immunodeficiency virus. Serious and troublesome adverse effects of blood transfusion are listed and ranked in order of approximate frequency. About 20% of all transfusions result in some type of adverse effect. The major serious risk of blood transfusion today continues to be transfusion-associated viral hepatitis. This entity is usually subclinical but frequently results in serious chronic liver disease. Transfusions should be avoided unless patient care would be compromised if withheld.

Optic nerve hypoplasia. Scott R. Lambert, MD; Creig S. Hoyt, MD; Michael H. Narahara. Survey of Ophthalmology, Inc, *Survey of Ophthalmology,* vol 32, no 1, July-August 1987, pp 1–9.

Optic nerve hypoplasia is an easily overlooked, nonprogressive developmental anomaly which results in a wide range of visual deficits. It is frequently associated with clinically significant central nervous system and endocrine abnormalities. Maternal substance abuse is increasingly recognized in many cases. A supranormal regression of optic nerve axons in utero, rather than a primary failure of differentiation, is proposed as the pathogenesis.

Objectives for cleft palate repair. R. W. Pigott, FRCS. Little, Brown and Company, *Annals of Plastic Surgery,* vol 19, no 3, September 1987, pp 247–259.

Improved anesthesia and nutrition are permitting earlier safe cleft palate repair, with higher success rates. Three factors that are considered necessary to obtain satisfactory function of the soft palate for speech are (1) adequate length, (2) adequate mobility, which should include consideration of resting tension and elasticity of the levator and depressor muscles, and (3) the need for conformity of the dorsal surface to the pharyngeal wall, which this paper seeks to emphasize. These concepts are examined with reference to the literature and observations made by the author from endoscopic and x-ray studies and from electrical stimulation of the palate muscles prior to palate repair. A technique for relocating the musculus uvulae is described. It is concluded that at least nine out of ten palates are long enough at birth and have sufficient mobility, provided that this is not impaired iatrogenically, to obtain satisfactory speech. Emphasis needs to be placed on providing a normal dorsal convexity and, where levator activity appears to be inadequate, means need to be found whereby inappropriate activity or tension of the palate depressors can be diagnosed and effective treatment devised.

Gastric *Campylobacter*-like organisms, gastritis, and peptic ulcer disease. Martin J. Blaser, MD. Reprinted with permission from *Gastroenterology,* vol 93, no 2, pp 371–83. Copyright 1987 by The American Gastroenterological Association.

Although the presence of gastric bacteria has been long established, the recognition and isolation of *Campylobacter pylori* and similar organisms has opened a new era in the understanding of inflammatory gastroduodenal conditions. Visualization or isolation of gastric *Campylobacter*-like organisms (GCLOs) is significantly associated with histologic evidence of gastritis, especially of the antrum. Correlation with peptic ulceration also exists but probably is due to concurrent antral gastritis. Outbreaks of hypochlorhydria with concomitant gastritis have been attributed to GCLO infection, and a human volunteer became ill after ingesting *C pylori.* Despite rapid microbiologic characterization of the organisms and the epidemiology, pathology, and serology of infection, the pathogenetic significance of GCLOs remains unknown. Whether GCLOs cause, colonize, or worsen gastritis must be considered an unanswered question at present. The efficacy of antimicrobial treatment of GCLO infection on the natural history of gastritis is not presently resolved. Nevertheless, GCLOs are at the least an important marker of inflammatory gastroduodenal disease, and attempts to ascertain their clinical significance are clearly warranted.

Information for Authors

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an Editorial Committee, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should by typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

When citing clinical laboratory data, please report in conventional units, followed in parentheses by Systeme International (SI) units.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine.*

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: CBE style manual: a guide for authors, editors, and publishers in the biological sciences. 5th ed, rev and expanded. Bethesda, Md, Council of Biology Editors, Ine, 1983.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, which are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Authors, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, Editorial Committee, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within one month of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine.*

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

The girls carve a niche in the "old boys' club"

Women and men physicians are different, and they are the same. Dr Margie Peschel recalls that during her medical training, she was greeted with an orchid when she woke up in the obstetrics unit on Mother's Day. She was sleeping there—an experience unique to a woman physician—because residents' quarters were occupied by men only. Despite the differences, Dr Ruth Bain asserts, the time has come to "get away from gender and just think about being doctors." When the focus is set on common experiences and needs, organized medicine is an important part of the picture, offering valuable information and representation. But not all physicians are taking advantage of those services and supporting organized medicine. Women are not as well represented in organized medicine as are their male colleagues. And, as the number of women physicians grows, so does the need for their participation.

The following article presents some of the reasons why women physicians are underrepresented in the Texas Medical Association and the American Medical Association and the views of several women who are leaders in organized medicine.

Founded in 1853, the Texas Medical Association boasted that membership was "open to every gentleman of the Medical Profession." Forty-five years later, in 1898, Dr Minnie C. Archer, a Houston eye, ear, nose, and throat specialist and an 1894 graduate of the Woman's College of Medicine at Philadelphia, became the first woman physician to join the androcentric society. Since her historic induction, the number of women physicians in the TMA has grown steadily, and they now comprise 14% of the membership.

Still, women physicians have not joined organized medicine at the same rate as their male colleagues. At the national level, the American Medical Association reports that only 28% of active women physicians are members of the organization, while 45% of male physicians belong. Among Texas' active women physicians, 35% are members of the AMA. Forty-nine percent of the men belong to the national association.

At the state level, the picture is not so bleak. Sixty-seven percent of women physicians and medical students have joined TMA, and 78% of male physicians and medical students are members.

A handful of women physicians have gone beyond membership in name only to become leaders of organized medicine. Sixty-three women physicians and medical students are members of the association's boards, councils, and committees, making up 8% of the "official family." The association has had two women presidents: May Owen, MD, a Fort Worth pathologist, who served during 1960–1961, and Ruth Bain, MD, an Austin family physician, who served during 1982–1983. During 1986–1987, three of the association's officers were women: Betty P. Stephenson, MD, Sugar Land, was treasurer; Margie B. Peschel, MD, Fort Worth, secretary; and Nancy Dickey, MD, Richmond, vice president. Drs Peschel and Stephenson continue in their offices this year.

Dr Bain joined TMA in 1946; Dr Stephenson, in 1957; Dr Peschel, in 1964; and Dr Dickey, in 1977. Spanning four decades, their professional experiences vary with their times and lifestyles. But each of these physicians is a success story for women in organized medicine.

Dr Bain holds, "I don't have the feeling that I was kept from doing anything because I was a woman. TMA's doors have been open to women for some time . . . . If I thought that I had been put in a position in organized medicine as a token woman and not because I deserved it, I'd be insulted," she says. She adds, "I sense a much more open attitude, more desire to participate among the young women in organized medicine today. I'm seeing more enthusiasm for involvement." She advises young women to express that enthusiasm. "I think sometimes, there's a tendency to wait and see if you're going to be asked. You need to make your desire to participate known and take the jobs that are given, no matter how menial." Dr Bain's first job in organized medicine was as editor of Travis County Medical Society's journal, which "was not all that impressive" a publication at the time.

Dr Stephenson has been active not

Dr Ruth Bain, a past president of TMA, predicts that the number of women leaders in organized medicine will increase. "The big increase in the number of women physicians has been in the last 10 to 15 years, and it takes that long to get your credentials at the lowest level and climb the ladder."

1. Membership market share (TMA), female physicians and medical students, Aug 17, 1987.

Type of Practice	Members	Nonmembers	Number of Women Physicians	% Who Are Members
Direct patient care	1,480	469	1,949	76
Resident	747	856	1,603	47
Teaching	189	149	338	56
Administration	25	44	69	36
Research	11	22	33	33
Student	982	91	1,073	92
Retired	105	40	145	72
Military	11	106	117	9
First year practice	141	60	201	70
Total	3,691	1,837	5,528	67

only in the TMA, but also in Harris County Medical Society, where she served as president last year. Although she had belonged to organized medicine since 1957, Dr Stephenson did not become active until the mid-70s "for the same reason that many women physicians probably don't participate, which is that you can't do everything." In addition to getting her anesthesiology practice off the ground during those early years, she was raising four children. Motherhood helped hone Dr Stephenson's leadership and management skills. "Trying to manage four kids and a car pool and a baseball schedule and who goes to dance lessons today and who has scout meeting tonight—the management skills you get from that can't be documented anywhere. But, don't think that you don't get them!"

Dr Peschel, who also is the recipient of the Tarrant County Medical Society's prestigious Gold Headed Cane award and chairs TMA's Committee on Blood Banking and Blood Transfusion, remembers discrimination against women entering medical education in the 1950s and 1960s. She recalls that two women members of her class obtained postgraduate degrees and applied and re-applied over a period of years before joining other class members who did not have such impressive credentials. "I'm sure other qualified women became discouraged along the way," she says. She adds that during an interview with a medical school representive, her questioner asked if she planned to marry and have children. Having answered yes to both questions, Dr Peschel was a bit surprised by her acceptance, and fellow premed students were amazed by her candor. But Dr Peschel was determined to prove that women were capable, and organized medicine afforded her opportunities to prove her point and set an example for younger women physicians. "I'm not the kind of woman who's been out there bra-burning and demonstrating, but I've always refused to be exploited," she says. "I took on these responsibilities not only for myself, but because I felt and still feel responsible for women coming after me. I think doors have been open because we said, 'I'm going to show you that women can do anything.'"

Dr Dickey observes that "before women in medicine was an 'in' topic, our women in Texas were getting a fair amount of encouragement . . . . We have a long history of female leadership here, which has not been seen in many other states." Dr Dickey does not feel that she ever was the brunt of any discrimination. She adds, "I think we have so carefully attuned the men that, if anything, women may have a better crack at (leadership positions) than the guys do."

In addition to her involvement with TMA activities, Dr Dickey has served as chairman of the AMA Council on Ethical and Judicial Affairs and is the mother of three. Her involvement in organized medicine began when she was a resident. She attended an AMA meeting in San Francisco and won a seat on the Council on Member Services when "the other fellow (who was running for the position)

Dr Betty Stephenson is the mother of four and a leader in organized medicine.

Dr Margie Peschel is serving as TMA's secretary.

Dr Nancy Dickey claims "a long history of not being able to sit back quietly and see things being done."

didn't show up." Her view of medical issues changed with that exposure. "The members of the council made come alive the issues of Medicare, third party payments, things that didn't exist in the protected atmosphere of a residency program." With what she calls "a long history of not being able to sit back quietly and see things being done," Dr Dickey found it " . . . very frustrating to try to go home to my fellow residents and say, 'Wake up! Look at what's happening out there!' Just as frustrating as it is as a real doctor to come home to my fellow physicians and say, 'Wake up! Look what's happening!'"

While Drs Bain, Stephenson, Peschel, and Dickey have made exemplary commitments to organized medicine, they remain exceptions. All four agree that family obligations are a major roadblock to women physicians' increased participation. "The reason for not joining that I hear most often—the one I give the most credence to—is the fact that women already are juggling as many oranges, balls, or whatever, as they feel like they successfully can keep in the air," Dr Dickey says. Dr Peschel adds, "The major task right now for the woman physician is to resolve her career/family conflict—learn how to delegate tasks in her household. We can't be superwomen. Women physicians really are perfectionists. They want to be the best mothers, the best physicians, the best wives, have the cleanest houses, like superwomen."

Dr Stephenson observes that many women are in salaried positions and may not be able financially to join. She adds, "Some women may feel that if they don't have the time to participate, there is no benefit in belonging."

Having overcome whatever barriers there may be to membership, these four women feel that their association with organized medicine has yielded professional and personal rewards that are not gender-specific. Dr Dickey says, "What all physicians have to gain from membership is a wider perspective. And, a nice side effect of that is that there's a wider group of support people to look to . . . . I have a group of friends now that span from the state of Washington to the state of Florida, and from the state of Maine to Southern California that I otherwise never would have met or come to know." In that same vein, Dr Bain says that "The biggest help membership has been to me was to keep me informed on a wide range of issues."

2. Age comparison, female members and nonmembers (TMA), Aug 17, 1987.

Age	Members	%	Nonmembers	%	All Women Physicians	%
20–40	2,764	75	1,561	85	4,325	78
41–60	694	19	240	13	934	17
61+	233	6	36	2	269	5
Total	3,691	100	1,837	100	5,528	100

Considering what TMA and the AMA might do to encourage more women physicians to join, Dr Stephenson notes that the associations might benefit from making nonmember women physicians aware that organized medicine is not just an "old boys' club." She gives the example of a woman physician who refused membership and wrote Dr Stephenson: "I used to belong and was active, but now I am trying to raise two children and practice. And, besides all that, it's nothing but an old boy's club anyway. Call me when you get to be president." Dr Stephenson's reply was a page out of the TMA membership directory, showing three women physicians in office, along with a page from the Harris County Medical Society roster that pictured Dr Stephenson as president. "This lady is in Harris County and had no earthly idea that I was president of the county medical society last year. But, she's on the outside, and unless she happened to see it in the paper, how would she know? So, we need to be creative in how we get to these people to let them know about organized medicine. And, I just seized that opportunity to write that lady."

Dr Peschel suggests that programs that address the problems unique to women physicians who are under the stress of trying to raise a family and pursue a demanding career might alert women to the fact that organized medicine recognizes their concerns.

For those women physicians who aspire to be leaders, Drs Stephenson and Peschel send the message that it is possible to find time for organized medicine in the midst of family obligations. Dr Peschel recalls that when her daughters were younger, she and her husband took turns attending Brownies meetings, and she worked in a group practice that allowed flexibility in scheduling and time to "go hear my little one say one line in the school play." Dr Stephenson says that young mothers need to know "that if the right sort of arrangement is made with kids, parents don't need to feel guilty. When our children were old enough to say so, they told me they didn't feel cheated. And, that's important to know."

Further, organized medicine needs to emphasize the fact that membership does not necessarily entail a large commitment of their time. Dr Stephenson notes, "I would encourage women to join, even if they don't do anything except 'belong.' And, then at the point at which they can become more than just dues-payers, then jump in." Dr Dickey agrees, adding, "If they agree with the stands that we take on tort reform and peer review and other issues, then we need their names on the rolls. And, if they find that they're interested enough to speak out, then we welcome them at any level of involvement that they choose . . . . We need to recognize that 90% of our members are going to be members in name only and recognize that's perfectly OK. Not all of us are presidents of the PTA, but it doesn't mean that we're not interested in our children's schooling."

TMA President David Vanderpool concurs that no matter what level of involvement women physicians choose, their support is vital. He emphasizes that in order to achieve its goals, organized medicine must be unified. "We certainly want to attract women not only because they're women, but also because they're doctors, and we want all the doctors we can get in organized medicine."

DONNA B. JONES
News Editor, *Texas Medicine*

SOUTHWEST MEDICAL ASSOCIATES

PHYSICIANS NEEDED

Southwest Medical Associates, Nevada's oldest and largest multispecialty group, has immediate full-time career positions in Family Practice, Internal Medicine, Endocrinology, Cardiology, and Occupational Medicine.

Positions offer excellent compensation and benefits plus pension and profit sharing. Malpractice and relocation expenses included.

Interested M.D. or D.O. should apply with CV to:

SOUTHWEST MEDICAL ASSOCIATES
Employment
P. O. Box 15645
Las Vegas, NV 89114-5645

Equal Opportunity Employer

U.S. Postal Service

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION
Required by 39 U.S.C. 3685)

1A. TITLE OF PUBLICATION	1B. PUBLICATION NO	2. DATE OF FILING
TEXAS MEDICINE	0 0 4 0 4 4 7 0	Sept 23, 1987
3. FREQUENCY OF ISSUE	**3A. NO. OF ISSUES PUBLISHED ANNUALLY**	**3B. ANNUAL SUBSCRIPTION PRICE**
Monthly	12	$20.00

4. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION (*Street, City, County, State and ZIP+4 Code*) (*Not printers*)
1801 North Lamar, Austin, Travis, Texas 78701

5. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHER (*Not printer*)
1801 North Lamar, Austin, Travis, Texas 78701

6. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR (*This item MUST NOT be blank*)

PUBLISHER (*Name and Complete Mailing Address*)
Texas Medical Association, 1801 North Lamar, Austin, Texas 78701

EDITOR (*Name and Complete Mailing Address*)
Not applicable

MANAGING EDITOR (*Name and Complete Mailing Address*)
Rae Vajgert, 1801 North Lamar, Austin, Texas 78701

7. OWNER (*If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated.*) (*Item must be completed.*)

FULL NAME	COMPLETE MAILING ADDRESS
Texas Medical Association	1801 North Lamar, Austin, Texas 78701

8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (*If there are none, so state*)

FULL NAME	COMPLETE MAILING ADDRESS
none	

9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES (*Section 423.12 DMM only*)
The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes (*Check one*)

(1) [X] HAS NOT CHANGED DURING PRECEDING 12 MONTHS
(2) [ ] HAS CHANGED DURING PRECEDING 12 MONTHS
(*If changed, publisher must submit explanation of change with this statement.*)

10. EXTENT AND NATURE OF CIRCULATION (*See instructions on reverse side*)	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	ACTUAL NO. COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
A. TOTAL NO. COPIES (*Net Press Run*)	26,427	27,028
B. PAID AND/OR REQUESTED CIRCULATION 1. Sales through dealers and carriers, street vendors and counter sales	0	0
2. Mail Subscription (*Paid and/or requested*)	25,896	26,613
C. TOTAL PAID AND/OR REQUESTED CIRCULATION (*Sum of 10B1 and 10B2*)	25,896	26,613
D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS SAMPLES, COMPLIMENTARY, AND OTHER FREE COPIES	145	155
E. TOTAL DISTRIBUTION (*Sum of C and D*)	26,041	26,768
F. COPIES NOT DISTRIBUTED 1. Office use, left over, unaccounted, spoiled after printing	386	260
2. Return from News Agents	0	0
G. TOTAL (*Sum of E, F1 and 2—should equal net press run shown in A*)	26,427	27,028

11. I certify that the statements made by me above are correct and complete

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER
Rae Vajgert Managing Editor

PS Form 3526, Dec. 1985 (*See instruction on reverse*)

CARAFATE®
(sucralfate)

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

References:
1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 62-69, 1984.

Another patient benefit product from
PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY MO 64137

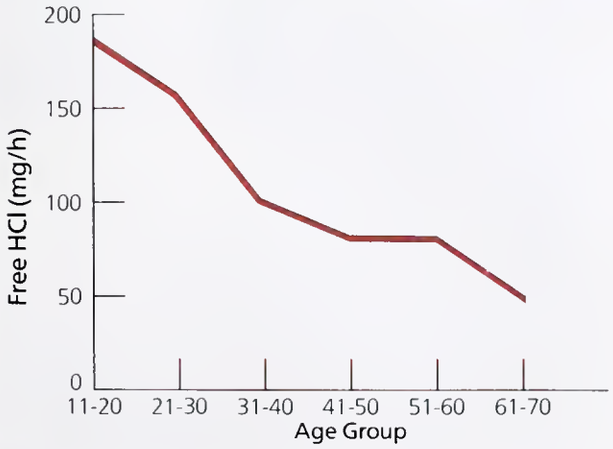
1595H7

Specialized ulcer therapy

When advancing age signals reduced acid secretion

If your duodenal ulcer patient is over 55, decreased mucosal resistance is more likely to cause an ulcer than hypersecretion of acid-pepsin.[1] A tendency toward lower acid secretion with advancing age has been shown.[2,3]

Declining gastric secretion and age[3]



CARAFATE® (sucralfate/Marion) makes sense as initial ulcer therapy for the elderly. Carafate provides ulcer healing rates comparable to H_2 antagonists without the risk of systemic side effects or drug interactions—an important benefit for older patients.

The unique, nonsystemic action of Carafate enhances the body's own ulcer healing ability, strengthening the mucosal structure as it protects damaged tissue from further injury.

When advancing age signals reduced acid secretion, choose the specialized ulcer therapy of safe, nonsystemic Carafate.

Nothing works like

CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

1595H7

There's never been a better time for her

nd PREMARIN®

Proven benefits beyond relief of vasomotor symptoms

No other estrogen proven effective for osteoporosis

Only conjugated estrogens tablets have established efficacy in both osteoporosis[1] and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.
And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.[2]

PREMARIN®
(conjugated estrogens tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

PREMARIN®
(conjugated estrogens tablets)

0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(conjugated estrogens)

Vaginal Cream

0.625 mg/g

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA
Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.
2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY
The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:
a. Increased sulfobromophthalein retention.
b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.
c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.
d. Impaired glucose tolerance.
e. Decreased pregnanediol excretion.
f. Reduced response to metyrapone test.
g. Reduced serum folate concentration.
h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding; spotting; change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis; change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting; abdominal cramps; bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache; migraine; dizziness; mental depression; chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only:* For treatment of moderate-to-severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.
2. *Given cyclically:* Osteoporosis. Female castration. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only: For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Lindsay R, Hart OM, Clark OM: The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763. **2.** Studd JWW, Thom MH, Paterson MEL, et al: The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens. In Pasetto N, Paoletti R, Ambrus JL (eds): *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13.

© 1987 Ayerst Laboratories
All rights reserved

6437/587

Ayerst® AYERST LABORATORIES
New York, NY 10017

Drug testing

In the face of widespread use of drugs and their intrusion into the workplace, it is tempting to turn to testing employees for drug use as a solution. Employers from both the public and private sectors are considering whether to test their employees for substance abuse. Some already have decided to do so and have been challenged in court as to the legality of such tests in court. Drug testing is fraught with legal concerns for employers. A recent Texas decision indicates it may be fraught with legal concerns for physicians as well. Physicians asked to conduct such tests should proceed cautiously. To avoid being named a party in a suit, a physician should (1) have a high degree of confidence in the screening tests and (2) obtain the tested individuals' consents for taking such tests and releasing test results.

The following article examines case law on the subject of drug testing with particular emphasis on two recent Texas decisions.

Public employers

The Fourth Amendment of the United States Constitution prohibits unreasonable searches and seizures (1). It states: "The right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated. . . ." The Fourth Amendment imposes a standard of reasonableness upon the exercise of discretion by government officials to safeguard the privacy and security of individuals against arbitrary invasions by government officials.

In *Capua v City of Plainfield*, firefighters employed by the City of Plainfield, NJ, were ordered to submit to a surprise urinalysis (2). Each had to submit a urine sample while under the surveillance and supervision of bonded testing agents. The firefighters had no notice of the city's intent to conduct mass urinalysis. A few weeks later, several firefighters were advised that their tests were positive for the presence of controlled substances. They were terminated immediately without pay. They were not informed of the particular substance found in their urine or of its concentration and were not provided copies of the laboratory reports.

The court determined that the urinalysis constituted a search and seizure under the Fourth Amendment. In order to determine whether the search was reasonable under the Fourth Amendment, the court balanced the intrusiveness of the search against its promotion of a legitimate government interest.

The court found that the city's mass testing program subjected firefighters to a relatively high degree of bodily intrusion. It was noted that urine generally is discharged and disposed of privately. The court additionally noted that the surveillance during urine collection forced those tested to expose parts of their anatomy to the testing official in a manner akin to strip search exposure. Furthermore, the court found that compulsory urinalysis forces individuals to divulge private, personal medical information unrelated to the government's interest in discovering illegal drug abuse.

The court then noted that the deleterious effects of drug consumption on public safety officers' ability to properly perform their duties is an issue legitimately within the city's concern. The question the court had to answer was whether the city chose reasonable means to address its concern. The court concluded in this case that they were not reasonable. The court stated that the invidious effect of mass urinalysis is that it casually sweeps up the innocent with the guilty and willingly sacrifices each individual's Fourth Amendment rights in the name of some larger public interest. In this case, the City of Plainfield essentially presumed the guilt of each person tested. Such an unfounded presumption, the court noted, is contrary to Constitutional protections against arbitrary and intrusive government interference set forth in the Constitution.

The court concluded that the Fourth Amendment allows the city to demand urine of an employee only on the basis of a reasonable suspicion predicated on specific facts and reasonable inferences drawn from those facts in light of experience.

In *Lovvorn v City of Chattanooga*, the city proposed to conduct mandatory urine tests on fire department employees. Several firefighters immediately asked that the city be enjoined from giving the tests. It was not disputed that the urine test amounted to a search and seizure within the Fourth Amendment. What was disputed was the reasonableness of such testing. The city argued that firefighters who live in the same quarters, routinely undress in each other's presence, and use a common toilet facility should not be offended by exposing themselves in the act of urination in the presence of another of the same sex. The court found however that firefighters still had the expectation of some privacy in the act of urinating, which was clearly invaded by personal observation of testing agents. The courts then considered the firefighters' expectation of privacy as being one society is prepared to recognize as reasonable. The court concluded that some individualized suspicion, some "reasonable suspicion," must exist before the tests could be carried out. The court stated that it could not find reasonable suspicion for the city to conduct its proposed tests. It noted that the city had not pointed to any facts concerning deficient job performance or physical or mental deficiencies on the part of its firefighters, either in general or with respect to specific personnel. It asserted that the evidence of deficient performance by individuals should be detectable to a considerable degree by the examination of such factors as job absenteeism, aberrant behavior, and personal financial difficulties.

In contrast to the above two cases, a federal appeals court held constitutional a drug testing program for some employees of the US Customs Service in *National Treasury Employees Union v Von Rabb* (4). The US Customs Service plan required workers who sought promotion into certain "covered positions" to submit to drug screening through urinalysis. Under

Medicine and the Law articles are intended to help physicians understand the law by providing legal information on selected topics. This article is published with the understanding that TMA is not engaged in providing legal advice. When dealing with specific legal matters, readers should seek assistance from their own attorneys.

the drug testing program, an employee tentatively selected for transfer to a covered position was advised in writing that the appointment was contingent upon successful completion of drug screening. After the employee received this notification, a urinalysis would be scheduled. If the employee then withdrew his application, he could retain his present position and no adverse inference was to be drawn from his decision not to pursue his application. At the test site, the employee was to fill out a pretest form, which asked for information regarding the employee's medication history and the circumstances under which the employee may have been in contact with illegal substances during the last 30 days. The employee then would go into a stall to produce the specimen with an observer in the restroom to listen for the normal sounds of urination and to collect the sample immediately. In weighing the intrusive effect of the plan against the legitimate governmental interest in a drug-free workplace and work force, the court found the plan to be constitutional because only employees seeking transfer to sensitive positions were required to take the test and the tests were administered only as a result of a process the employees set in motion. The court noted that the tests are reasonable because employees in these sensitive positions routinely have access to illicit drugs. Use of controlled substances by an employee of the Customs Service might seriously impair that employee's ability to carry out his duties. At press time, this case was on appeal to the United States Supreme Court.

Private employers

Because the Fourth Amendment does not apply to activities of the private sector, employees of private industry who challenge drug testing must look to state law for relief. Texas does not recognize either a constitutional or a statutory right to privacy. However, Texas does recognize a common law right to privacy.

In the case of *Jennings v Minco Technology Labs, Inc*, a Travis County District judge held that Minco Technology Labs, Inc's urinalysis policy was permissible. The policy subjected employees to random, periodic testing without individualized suspicion or evidence of impairment on the job as a prerequisite (5). An employee who refused the test would be fired. If the employee were tested and found to have positive results, he would be offered a rehabilitation program. If the program proved ineffective for that employee, he would be fired. Specimens were to be collected at a private medical office without direct observation. An enzyme multiplied immunoassay technique (EMIT) test was to be used to provide an initial screening. If positive, then a gas chromatography/mass spectrography was to be used to confirm the existence of illegal drug use. If the results were positive from the confirmatory test, then the employee could submit the same sample to a laboratory of his choice. If the employee were terminated, Minco would not disclose the reasons for termination.

In making his decision, the judge issued to counsel for the parties a letter outlining the legal principles on which he based his decision. In this letter the tort "invasion of privacy" was stated to consist of three elements: (1) an intentional intrusion (2) upon the seclusion, solitude, or private affairs of another, (3) which would be highly offensive to a reasonable person, with the additional requirement that the intrusion be unreasonable, unjustified, or unwarranted. The judge held that Minco's policy was not an intentional intrusion because employees had to consent. However, he did note that if Minco's drug testing was determined to be an intentional intrusion then mandatory urinalysis would be an intrusion into an employee's seclusion, solitude, or private affairs. But he further commented that the policy was reasonable and justified.

The judge noted that Minco was a high-tech custom processor and packager of micro chips and wafers with a substantial portion of its product going to defense, aerospace (eg, space shuttle), and medicine (eg, pacemakers). Production of such items demands a high degree of skill. Fine motor impairment caused by drug use would be hard to detect at the plant without random drug screening. The results of an impairment could contaminate or damage a product that eventually could be incorporated into a space shuttle or heart pacemaker. The court queried, "Must a shuttle crash or a pacemaker fail before there is a sufficient legal ground to conduct the tests that would help eliminate the problem?" The judge thought not and stated that under the particular facts of the case before him the tests were reasonable and Minco could require drug testing as a condition of employment.

Physicians as drug testers

In regard to physician involvement with drug testing, a recent Texas appeals court decision on appeal to the Texas Supreme Court indicates that not only employers but also physicians may be subject to being named as defendants in suits involving drug testing.

In *Crocker v Synpol, Inc*, an employee of Synpol had gone to a first aid station at work complaining that he injured his back on the job (6). At the request of the safety manager, the nurse on duty sent the employee to the office of the physician who was under a contractual arrangement with Synpol, Inc. Upon examination, the physician was not able to determine what was wrong. Because the employee was "zonked out on something," as the physician testified, he did not treat the employee other than with a Mettler Sonicator, which the physicians described as a muscle relaxing treatment. After about 15 to 30 minutes passed, the safety manager asked the physician if he would perform a urine drug screen test. The doctor testified he had no objection as long as the patient had no objection. The doctor instructed the nurse that Synpol would like a drug screen test on the employee and, if he was willing, for her to obtain a specimen. There was no written consent, and the evidence was in conflict as to whether verbal consent was obtained for the testing. However, the physician's testimony implied a possibility that the employee did not have the capacity to consent because of his condition. The findings of the urinalysis, reflecting some trace of marijuana, were given to Synpol at once.

The employee sued his employer for wrongful discharge and also sued the physician for breach of confidentiality. Although the trial court granted the physician his motion for summary judgment, the appeals court reversed the trial court's judgment and stated that the physician's reporting of the results of the urinalysis to Synpol raised a material fact issue. The court

noted that the employee did not give any separate release permitting the doctor to release any confidential communication concerning the urinalysis to Synpol. The physician's attorneys are arguing on appeal that an interpretation of the Medical Practice Act would allow disclosure of test results to the employer because the employer paid for the examination.

Conclusion

Many employees are not hesitant to sue their employers regarding drug testing policies, particularly if the test prompts discharge. Many people feel strongly that such testing violates an employee's right to privacy. Challenges to such testing policies most likely will continue. Already, a Texas physician and an employer have been sued as a result of a drug test. Although in this case the allegation against the physician was a breach of confidentiality, allegations that a physician negligently performed a drug screening test resulting in an employee being wrongfully terminated would not be surprising. Pending further decisions, particularly by Texas courts, physicians should proceed cautiously in their involvement with drug testing. They should keep abreast of changes in medical technology regarding drug testing (7) and obtain valid written consents for testing and releasing test results.

HELENE A. ALT, JD
TMA Assistant General Counsel

REFERENCES

1. US Const amend IV.
2. Capua v City of Plainfield, 643 F Supp 1507 (D N J 1986).
3. Lovvorn v City of Chattanooga, 647 F Supp 875 (E D Tenn 1986).
4. National Treasury Employees Union v Von Rabb, 816 F 2d 170 (5th Cir 1987).
5. Jennings v Minco Technology, No 409,151 (Dist Ct of Travis County, 126th Judicial Dist of Texas, May 23, 1987).
6. Crocker v Synpol, Inc, 732 SW 2d 429 (Tex App—Beaumont 1987, writ pending).
7. Hoyt DW, Finnigan RE, Nee T, et al: Drug testing in the workplace—Are methods legally defensible? JAMA 258(4):504–509, 1987, and AMA Council on Scientific Affairs: Scientific issues in drug testing. JAMA 257(22):3110–3114, 1987.

You've chosen your profession.

We can secure it.

Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

S.K. Aldis

Stephen Keith Aldis, MD, a Fort Worth family physician, died July 14, 1987. He was 39.

A native of Kansas City, Mo, Dr Aldis was a 1974 graduate of the University of Kansas School of Medicine. After an internship at Methodist Hospital of Dallas, he was in private practice in Dallas. He joined the US Air Force in 1977. He was stationed in Las Vegas, Fort Worth, and San Antonio, before beginning a private practice in Fort Worth in 1985.

Surviving family members include his wife, Kathryn Aldis, Fort Worth; sons, Keith Martin Aldis and Ryan Gilman Aldis, both of Fort Worth; daughter, Anne Aldis, Fort Worth; parents, William and Kathryn Aldis, Fort Scott, Kan; and brother, Jim Aldis, Fort Scott, Kan.

J.L. Baskin

John L. Baskin, MD, a longtime Dallas pediatrician, died July 12, 1987, at age 67.

Dr Baskin was born in Cameron, Tex. He received his premedical education at The University of Texas at Austin and then graduated in 1944 from The University of Texas Medical Branch at Galveston. Dr Baskin served an internship at the US Naval Hospital at Oceanside, Calif, and then returned to Cameron, where he maintained a general practice for two years. After a fellowship at the Mayo Foundation of the University of Minnesota in Rochester, Dr Baskin began a pediatric practice in Dallas. During 1963–1965, he served as president of the staff at Children's Medical Center.

He is survived by his wife, Myrtle Baskin; daughters, Mary Lane Baskin and Ann Fuller; son, John S. Baskin; and two grandchildren, all of Dallas.

S.E. Burman

Stanley Ernest Burman, DO, died June 16, 1987. He was 55.

A native of Brooklyn, NY, Dr Burman was a 1958 graduate of Kirksville (Mo) College of Osteopathic Medicine. After an internship at Lancaster (Pa) Osteopathic Hospital, Dr Burman moved to Houston to begin a private practice.

Surviving family members include his wife, Marjorie Burman; sons, Scott Burman and Gregg Burman; daughter, Michelle Burman; and brother, Dr Richard Burman.

W.R. Cook

Walter R. Cook, MD, a San Antonio physician and life member of the Texas Medical Association, died July 13, 1987.

Dr Cook, 77, was a native of Cincinnati, Ohio, and received his doctor of medicine degree from The University of Cincinnati Medical School in 1935. He served an internship at Cincinnati General Hospital. A member of the US Army Medical Corps during 1936–1951, Dr Cook served in seven combat areas in the Pacific and European theaters during World War II. After retirement from military service, he began a private practice of internal medicine in San Antonio. He retired from the practice of medicine in January 1984.

Surviving family members include his wife, Dorothy McCloy Cook, San Antonio; sons, George W. Cook, MD, San Antonio, and George M. Grunert, MD, Houston; daughter, Sally Cook Hoffman, San Antonio; and six grandchildren.

M.L. Gray

Maston L. Gray, MD, a retired Jacksonville pediatrician, died July 11, 1987. He was 70.

Dr Gray was a native of Louisville, Ky, and received his doctor of medicine degree from Medical College of Virginia in Richmond in 1943. He served his internship and residency at Charity Hospital in New Orleans, and also worked as a resident in pediatrics at Medical College of Virginia and Babies Hospital in Wilmington, NC. He served in the US Navy in the South Pacific during World War II. Dr Gray practiced pediatrics one year in Greenville, NC, before moving in 1950 to Jacksonville where he was associated with Travis Clinic. In 1957 he was called back to the service as an Air Force lieutenant colonel and served in Germany and England. He returned to Jacksonville in 1960 and practiced at Travis Clinic until his retirement in 1981.

Surviving family members include his wife, Roberta Shaw Gray, Jacksonville; son, Lt Col Maston L. Gray, Jr, Washington, DC; daughters, Roberta "Bebe" King, Galveston, and Mary Claudia Sawson, Jacksonville; brothers, R.A. Gray, Chesapeake, Ohio, James M. Gray, Pittsburgh, W.H. Gray, Dallas, and Robert W. Gray, Winter Park, Fla; and two granddaughters.

W.W. Kelton, Jr

William White Kelton, Jr, MD, of Henly and formerly of Austin, died July 17, 1987. He was 74.

Dr Kelton, a Dallas native, graduated from Baylor College of Medicine in 1936 and served his internship and residency at Charity Hospital in New Orleans. He was a pediatrician for many years at the Children's Medical Center of Austin before his retirement in 1976.

He is survived by his son, David Kelton, Henly; daughter, Carolyn Scarbrough, Burgess, Va; brother, Hugh R. Kelton, Austin; and sister, Katherine Martyn, San Antonio.

M. Kurzner

Meyer Kurzner, MD, a Corpus Christi pediatrician, died June 18, 1987, at age 74.

A native of Cincinnati, Ohio, Dr Kurzner was a 1935 graduate of the University of Cincinnati College of Medicine. He remained in Cincinnati for an internship and residency at Cincinnati General Hospital. Dr Kurzner practiced in Oklahoma City and then served in the US Navy, first in the South Pacific and then as a pediatric consultant at the US Naval Hospital in Corpus Christi.

Active in the Nueces County Medical Society, Dr Kurzner served as president, as delegate to the Texas Medical Association, and as a member of the Board of Censors and the Public Grievance Committee.

Surviving family members include his daughters, Judy Kurzner, Woodbury, Conn; Sally Linman, MD, Portland, Ore; and Myra Kurzner, Corpus Christi; and son, Philip Kurzner, MD, Los Angeles.

T.E. Mabery

Trevor E. Mabery, MD, 51, a Dallas surgeon, died June 28, 1987.

Dr Mabery was born in Weatherford, Tex. He received a

bachelor of science degree from Baylor University and a medical degree from Southwestern Medical School in Dallas. His internship was at Baylor University Hospital, and his otolaryngology residency was at Mayo Clinic, Rochester, Minn.

Surviving family members include his wife, Lucy Mabery, Dallas; daughter, Janet Fulmer, Galveston; and sons, Daniel Mabery and Stephen Mabery, both of Dallas.

F.P. Peppard

Felix P. Peppard, MD, a Dallas surgeon, died July 17, 1987. He was 53.

Born in Wichita, Kan, Dr Peppard graduated from The University of Texas at Austin in 1958 following service in the US Army from 1954 to 1956. He received his medical degree from Southwestern Medical School in Dallas in 1962. His internship was at John Peter Smith Hospital in Fort Worth, and his residency was at Baylor University Medical Center in Dallas. Dr Peppard was a former president of the North Texas chapter of the American College of Surgeons.

He is survived by his sons, Mark Peppard, DDS, Austin, and William Felix Peppard, Dallas; daughter, Kelton Denise Peppard, Dallas; mother, Bonnie Helen Peppard, Austin; sisters, Katie Cox, Dallas, and Cynthia Freytag, Houston; and two grandchildren.

C.C. Riley

Claude C. Riley, Jr, MD, 64, a physician in Austin, died July 3, 1987.

Born in Quincy, Kan, Dr Riley graduated from the University of Kansas School of Medicine in Kansas City in 1954. Following graduation, he joined the US Air Force, served his medical internship at Fitzsimmons Army Hospital in Aurora, Colo, and received postgraduate training at the US Air Force School of Aerospace Medicine. He served in the USAF Medical Service until 1974 and was stationed at numerous locations, including Morocco, Thailand, Puerto Rico, New Mexico, Kansas, and North Dakota. From 1974 until his retirement in 1986, Dr Riley was a physician at The University of Texas Student Health Center in Austin.

Surviving family members include his wife, Ana B. Riley, Austin; daughter, Gayle Ann Riley, Austin; son, Steven C. Riley, Galveston; and mother, Mrs Alta Riley, Emporia, Kan.

S.M. Williams

Stewart M. Williams, MD, a longtime Beaumont internist, died July 11, 1987. He was 63.

A native of New Orleans, Dr Williams graduated from Tulane University Medical School in 1947. He served his internship and residency with the US Public Health Service in Baltimore, Md, and New Orleans. He practiced internal medicine for a short time in Kingsville, Tex, before moving to Beaumont, Tex, where he practiced until his retirement in 1984.

He is survived by his wife, Margaret "Cissy" Williams; sons, Charles Williams, Houston, and Dr Stewart Williams, Jr., Austin; daughter, Katharine Orgain, Victoria; and three grandchildren.

E.T. Wolf

E. Trowbridge Wolf, MD, a Houston physician, died July 15, 1987. He was 87.

Born in Pittsburgh, Dr Wolf graduated from Jefferson Medical College in Philadelphia in 1933. He served his internship at Frankford Hospital in Philadelphia and at the William Beaumont General Hospital while in the US Army.

Survivors include his wife, Minnie L. Wolf, Houston; daughter, Phyllis Wolf Sheinfeld, Houston; two grandsons; and one great-grandson.

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

S.K. ALDIS
Fort Worth, 1948–1987

J.L. BASKIN
Dallas, 1920–1987

S.E. BURMAN
Houston, 1931–1987

W.R. COOK
San Antonio, 1910–1987

M.L. GRAY
Jacksonville, 1916–1987

W.W. KELTON, JR
Henly, 1912–1987

M. KURZNER
Corpus Christi, 1912–1987

T.E. MABERY
Dallas, 1935–1987

F.P. PEPPARD
Dallas, 1934–1987

C.C. RILEY
Austin, 1922–1987

S.M. WILLIAMS
Beaumont, 1923–1987

E.T. WOLF
Houston, 1900–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audio-visual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student	$ 5.00	☐ Patron	$ 100.00
☐ Sustaining	$15.00	☐ Life	$1,000.00
☐ Subscribing	$25.00		

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

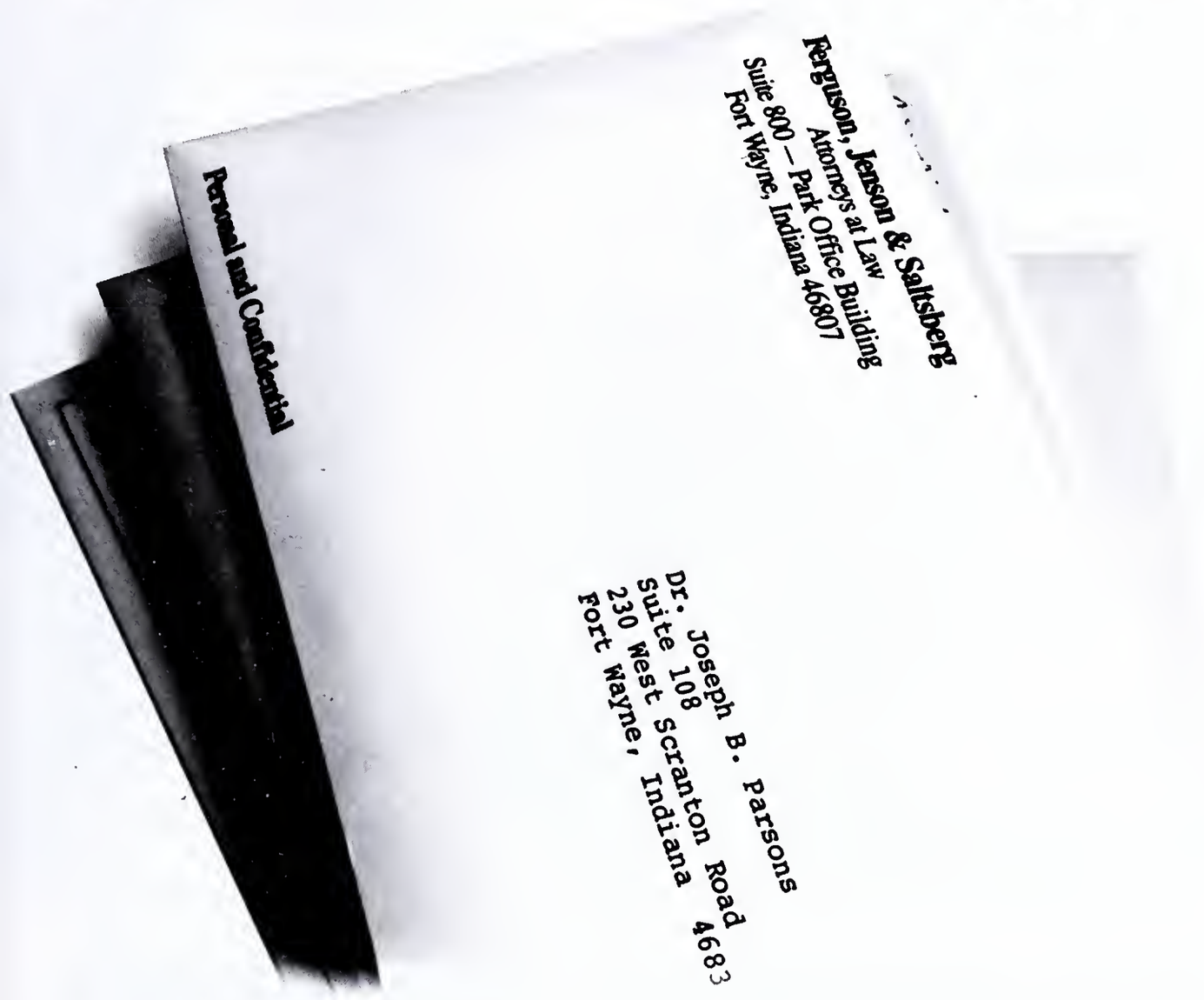
OCCASION _____

PLEASE NOTIFY:

_____

_____

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library will add more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512)477–6704.

In the TMA Library

Avioli LV (ed): *The Osteoporotic Syndrome: Detection, Prevention and Treatment,* ed 2. Orlando, Fla, Grune & Stratton Inc, 1987.

Chung RS: *Therapeutic Endoscopy in Gastrointestinal Surgery.* New York, Churchill Livingstone, 1987.

Darney PD (ed): *Handbook of Office & Ambulatory Gynecologic Surgery.* Oradell, NJ, Medical Economics Company Inc, 1987.

Fields HL: *Pain.* New York, McGraw-Hill Inc.

Ford RJ Jr, Fuller LM, Hagemeister FB (eds): *Hodgkins' Disease and Non-Hodgkin's Lymphoma. New Perspectives in Immunopathology, Diagnosis, and Treatment.* UT M.D. Anderson Clinical Conference on Cancer, vol 27. New York, Raven Press, 1984.

Gedgaudas-McClees RK (ed): *Handbook of Gastrointestinal Imaging.* New York, Churchill Livingstone, 1987.

Gillespie WJ, Nade S: *Musculoskeletal Infections.* Boston, Blackwell Scientific Publications, 1987.

Grauer K, Cavallaro DL: *ACLS: Certification Preparation and A Comprehensive Review,* ed 2. St Louis, The C.V. Mosby Company, 1987.

Hawke M, Jahn AF: *Diseases of the Ear: Clinical and Pathologic Aspects.* New York, Gower Medical Publishing Ltd, 1987.

Huffman JL, Bagley DH, Lyon ES: *Ureteroscopy.* Philadelphia, WB Saunders Company, 1988.

James JIP: *Poliomyelitis: Essentials of Surgical Management.* Baltimore, Edward Arnold, 1987.

Jandl JH: *Blood: Textbook of Hematology.* Boston, Little Brown and Company, 1987.

Kapetansky DI, *Techniques in Cleft Lip, Nose, and Palate Reconstruction.* New York, Gower Medical Publishing Ltd, 1987.

Kleinman PK: *Diagnostic Imaging of Child Abuse.* Baltimore, Williams & Wilkins, 1987.

Koller WC (ed): *Handbook of Parkinson's Disease.* New York, Marcel Dekker Inc, 1987.

Maudgal DP (ed): *Hypothermia: Medical and Social Aspects.* Elmsford, NY, Pergamon Press, 1987.

McGlamry ED (ed): *Comprehensive Textbook of Foot Surgery,* vol 1 and 2. Baltimore, Williams & Wilkins, 1987.

McGuire DB, Yarbro CH (eds): *Cancer Pain Management.* New York, Grune & Stratton Inc, 1987, 1985.

Miller S (ed): *Clinical Ophthalmology.* Bristol, Wright, 1987.

Nelson WE (ed): *Nelson Textbook of Pediatrics,* ed 13. Philadelphia, W.B. Saunders Company, 1987.

Ploem JS, Tanke HJ: *Introduction to Fluorescence Microscopy.* New York, Oxford University Press, 1987.

Primary Care of Cancer: Recommendations for Screening, Diagnosis and Management. Cleveland, Case Western Reserve University School of Medicine, 1987.

Quay HC (ed): *Handbook of Juvenile Delinquency.* New York, John Wiley & Sons Inc, 1987.

Sabbagha RD (ed): *Diagnostic Ultrasound: Applied to Obstetrics and Gynecology,* ed 2. Philadelphia, J.B. Lippincott Company, 1987.

Scheinberg LC, Holland NJ (eds): *Multiple Sclerosis: A Guide for Patients and Their Families,* ed 2. New York, Raven Press, 1987.

Shingleton HM, Orr JW Jr: *Cancer of the Cervix: Diagnosis and Treatment.* New York, Churchill Livingstone, 1987.

Silverman WA: *Human Experimentation: A Guided Step into the Unknown.* New York, Oxford University Press, 1985.

Urbaniak JR (ed): *Microsurgery for Major Limb Reconstruction.* St Louis, The C.V. Mosby Company, 1987.

White RA, Grundfest WS: *Lasers in Cardiovascular Disease.* Chicago, Year Book Medical Publishers Inc, 1987.

Wood JH (ed): *Cerebral Blood Flow: Physiologic and Clinical Aspects.* New York, McGraw-Hill Inc, 1987.

Yale JF: *Yale's Podiatric Medicine,* ed 3. Baltimore, Williams & Wilkins, 1987.

The benefit of antianginal protection plus safety...

CARDIZEM®: A FULLER LIFE

diltiazem HCl/Marion

- ***A remarkable safety profile***[1-6]
  The low incidence of side effects with Cardizem allows patients to feel better.
- ***Protection against angina attacks***[1,5,7-9]
  The predictable efficacy of Cardizem in stable exertional and vasospastic angina allows patients to do more.*
- ***A decrease in myocardial oxygen demand***
  Resulting from a lowered heart rate-blood pressure product.[5]
- ***Compatible with other antianginals***[6†]
- ***Safe in angina with coexisting hypertension, COPD, asthma, or PVD***[1,3,5,6]

90 mg NEW 120 mg GREATER DOSAGE FLEXIBILITY

*CARDIZEM® (diltiazem HCl) is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

†See Warnings and Precautions.

Please see brief summary of prescribing information on the next page.

CARDIZEM® ANTIANGINAL PROTECTION PLUS SAFETY

diltiazem HCl/Marion

Usual maintenance dosage range: 180-360 mg/day

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg, 60 mg, 90 mg, and 120 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients or 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing.

References: ***1.*** *Schroeder JS: Mod Med 1982;50(Sept):94-116.* ***2.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***3.*** *O'Rourke RA: Am J Cardiol 1985;56:34H-40H.* ***4.*** *McCall D, Walsh RA, Frahlich ED, et al: Curr Probl Cardiol 1985;10(8):6-80.* ***5.*** *Frishman WH, Charlap S, Goldberger J, et al: Am J Cardiol 1985;56:41H-46H.* ***6.*** *Shapiro W: Consultant 1984;24(Dec):150-159.* ***7.*** *O'Hara MJ, Khurmi NS, Bowles MJ, et al: Am J Cardiol 1984;54:477-481.* ***8.*** *Strauss WE, McIntyre KM, Parisi AF, et al: Am J Cardiol 1982; 49:560-566.* ***9.*** *Feldman RL, Pepine CJ, Whittle J, et al: Am J Cardiol 1982;49:554-559.*

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MO 64137

0034M7

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
Suite 407, West Houston Doctors Center, 12121 Richmond Avenue, Houston 77082; 713 496-1006

THE UNIVERSITY CENTER FOR PAIN MEDICINE AT HERMANN
Hermann Hospital, 6411 Fannin, Houston, Texas 77030
713 797-2732

A multidisciplinary center which offers comprehensive treatment options for acute, subacute, and chronic pain patients. The center's total management of each patient's pain recognizes both the central and peripheral components of the syndrome.

PRITHVI RAJ, MD, FACA, FFARCS
Orthopaedist
Diplomate American Board of Anesthesiology

SHELLY LISS, MD
American Board of Physical Medicine and Rehabilitation

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

ALLERGY AND IMMUNOLOGY
William R. Lumry, MD

RHEUMATOLOGY
Carlos M. Kier, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Tom L. Hampton, MD
David A. Haymes, MD
Carl Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS
Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
COLON & RECTAL SURGEON
OUT-PATIENT LASER HEMORRHOIDECTOMY

Bowel obstruction from cancer of the colon, volvulus, Crohn's or ulcerative colitis, toxic megacolon, diverticular obstruction, acute or chronic colon bleeding, colovesicle fistula, rectovaginal fistula, rectal fistulas, rectal prolapse, anal incontinence, warts, pruritus ani, rectal abscesses, hemorrhoids and other rectal conditions.

Emergency consultations and referrals; weekends and evenings.

Privileged at Baylor University Medical Center and Methodist Central Hospital.

214 821-4300, answered 24 hours and weekends
214 341-0859, residence

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

DERMATOLOGY ASSOCIATES OF DALLAS

David S. Alkek, MD

Hair Transplantation, Scalp Reduction,
Dermabrasion, Chemical Peel and Collagen

Medical City Dallas, 7777 Forest Lane, Building 8,
Suite 309, Dallas, Texas 75230; telephone 214 788-0088

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

HERMANN SKIN DISEASE TREATMENT CENTER

Hermann Hospital, 6411 Fannin, Houston, Texas 77030; 713 792-5115
A comprehensive outpatient facility specializing in the treatment of psoriasis and other conditions requiring intensive topical care and ultraviolet light treatment.
Robert E. Jordon, MD
Medical Director, Hermann Skin Disease Treatment Center
Professor and Chairman, Department of Dermatology
University of Texas Medical School at Houston

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner
Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism
Practice Limited to Endocrinology & Diabetes
5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

TMA Physician Placement Service
. . . Another service of your association

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

ENDOCRINE CLINIC OF LUBBOCK

Jose R. Beceiro, MD, FACP
Diplomate of American Board of Internal Medicine and
Subspecialty Board in Endocrinology and Metabolism
Practice Limited to Endocrinology and Metabolism
2424 50th Street, Suite 304, Lubbock, Texas 79412; 806 791-5007

FAMILY PRACTICE

THE FAMILY MEDICAL CENTER

Katherine S. Henry, MD, PA
Michele D. Reynolds, MD
Diplomates, American Board of Family Practice
Providing comprehensive family medical care, gynecologic and surgical services, and internal medicine diagnostics.
721 W. Arapaho #2, Richardson, Texas 75080; 214 234-4776

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery
General & Peripheral Vascular Surgery
1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery
DAVID J. ZEHR, MD—Microsurgery
ARNOLD V. DiBELLA, MD
Hand Surgery and
Upper Extremity Reconstructive Surgery
3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA
Diplomates American Board of Orthopaedic Surgery

Hand Surgery and Reconstructive Surgery
of the Upper Extremity

8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS
Hand Surgery and Reconstructive Surgery
of the Upper Extremity

St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd.,
Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas
75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS
Chief, Department of Orthopaedic Surgery
Baylor University Medical Center

Reconstructive Surgery of the Hand

Suite 412, Doctor's Building, 3707 Gaston Avenue,
Dallas, Texas 75246; Office 214 823-9440

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery

Surgery of the Hand

30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA

Surgery of the Hand

803 West Terrell, Fort Worth, Texas 76104
Telephone 817 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3800 Gaston Ave., Suite 303, Dallas, Texas 75246;
214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 8116, Dallas, Texas
75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

HAND, MICROVASCULAR AND
REPLANTATION SERVICE
Treatment of traumatic and non-traumatic injuries of the
hand and wrist, soft tissue problems of the upper extremity
and reconstructive hand surgery.

David H. Hildreth, MD
Diplomate American Board of Orthopaedic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Orthopaedic Surgery
The University of Texas Medical School at Houston; 713 792-5994

Dennis P. Maher, MD
Diplomate American Board of Plastic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Plastic and
Reconstructive Surgery
The University of Texas Medical School at Houston; 713 792-5473

For more information call 1-800-392-LIFE
6431 Fannin Street, Houston, Texas 77030

TMA Physician Health & Rehabilitation
Hotline 512 477-5575

. . . Another service of your association

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue,
Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA

Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD

920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA

Diplomates of the American Board of Neurological Surgery

1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery

Charles W. Simpson, MD
Morris Sanders, MD
Casey E. Patterson, MD (Retired)
W. Robert Hudgins, MD
Richard H. Jackson, MD

St. Paul Professional Bldg., 5959 Harry Hines Blvd., Suite 620,
Dallas, Texas 75235; 214 637-0420

Presbyterian Professional Bldg., 8210 Walnut Hill Lane, Suite 905;
Dallas, Texas 75231; 214 369-7596

ARLINGTON ASSOCIATION OF
NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 77054
Electroencephalography
EEG service via telephone transmission to
hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

HERBERT C. ALLEN, MD, FACNM

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

TMA HealthWise Series

. . . Another service of your association

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

OCCUPATIONAL MEDICINE

ERIC G. COMSTOCK, MD

Diplomate, American Board of Medical Toxicology

Occupational and Environmental Toxicology

6910 Bellaire Blvd., Suite #12, Houston, Texas 77074
Phone 713 541-3214

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES

Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or 800 872-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 821-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 75204
214 521-1153; 1-800-442-5376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 78205; 512 226-5191

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
713 528-1122

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS
Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD
John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas 77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas 77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

Heights Medical Eye Center, 535 West 20th Street, Houston, Texas 77008;
713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Schubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA

TMA Physicians Benevolent Fund
. . . Another service of your association

F. Carlton Hodges, MD
J. Price Brock, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Pelnert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; B06 79S-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-B2B4

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 112B, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-98B8

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA

ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

SAN ANTONIO HEAD & NECK SURGICAL ASSOCIATES, PA

Board Certified Otolaryngologists

Julius F. Marlowe, MD
Michael H. Bertino, MD
G. Paul Laursen, DDS, MD, FACS, FAAFPRS
Harry Schilling, MD
Stephen J. Talley, MD

ENT, Facial Plastic Surgery, Lipo-Suction

Madison Square Medical Building, Suite 304, 311 Camden, San Antonio, Texas 78215; 512 224-5481

Physicians' Plaza, Suite 370, 8038 Wurzbach Road, San Antonio, Texas 78229; 512 690-1326

TMA Memorial Library

. . . Another service of your association

PATHOLOGY

FORT WORTH PATHOLOGY LABORATORY

Dorothy Patras, MD, Director
John E. McDonald, MD

Anatomic Pathology and Consultation in Clinical Pathology

1425 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.

J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

THE INSTITUTE FOR REHABILITATION AND RESEARCH (TIRR)

In the Texas Medical Center, Houston, Texas

Comprehensive care hospital specializing in rehabilitation care for persons disabled by injury or disease. Inpatient and outpatient services.

Spinal Cord Injury
Head Injury
Amputee
Stroke
Pediatric
Neurophysiology
Polytrauma
Restorative Surgery
Scoliosis
Spina Bifida
Cerebral Palsy
Neuromuscular

Accredited by: Joint Commission on Accreditation of Hospitals
Commission on Accreditation of Rehabilitation Facilities

For referrals call 713-797-5922 or in Texas 1-800-44REHAB. Ask for the Patient Services Coordinator.

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD
John E. Lomax, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

Representing TMA's legislative views

. . . Another service of your association

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. 8ox 2476, Fort Worth, Texas 76113; 817 336-0446

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American 8oard of Surgery
Diplomate American 8oard of Plastic Surgery

Larry E. Reaves, MD
Diplomate American 8oard of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza 8uilding
800 Eighth Avenue, Fort Worth, Texas 76104
817 335-47S2 817 332-9441 817 335-4755

WILLIAM E. BARNES, MD

Diplomate American 8oard of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 3Bth Street, Suite 608, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA

Diplomate American 8oard of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite 801, San Antonio, Texas 78229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION

Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; 806 792-2313

STEPHEN C. LESAUVAGE, MD

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-8296

PLASTIC SURGERY CLINIC OF AUSTIN

Robert A. Ersek, MD, FACS
Diplomate of American 8oard of Plastic Surgery

Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 7B705
24 HR# 512 479-6805 & 512 474-HAND

The 8urn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES

302 Oak Hills 8uilding, Louis Pasteur Drive, San Antonio, Texas 78229
Telephone 512 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone 817 756-0111

ROGER D. HARMAN, MD

Diplomate American 8oard of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS

Excellence in Form & Function
Neal R. Reisman, MD, FACS
William 8. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American 8oard Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 77082; 713 55B-5353
Greenpark, Memorial Health Center/Sugar Land, Memorial Southwest Professional 8uilding, The Houstonian

SAEED BEG, MD, PA

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive Surgery, Hand Surgery

2602 Texas Drive, Irving, Texas 75062
Phone 214 258-0025

PSYCHIATRY

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, A8PN: Psychiatry
Diplomate, A8PN: Child-Adolescent

Presbyterian Professional 8uilding II, Suite 404,
8220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
8yron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen 8. Erdman, MD
Don C. Payne, MD
Mark J. 8lotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. 8rownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell 8lvd., Dallas, Texas 75228
214 381-7181

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211; 214 296-6241

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone 817 335-9409

TMA Physician Membership Directory
. . . Another service of your association

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
R. Sanford Kiser, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; 817 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
817 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIATION ONCOLOGY

RADIATION ONCOLOGY AT MEMORIAL SOUTHWEST HOSPITAL, HOUSTON

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD

Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

TMA Action monthly newsletter
. . . Another service of your association

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS

Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; 817 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

EUGENE R. TODD, MD, PA

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS

Diplomate, American Board of Urology

Adult and Pediatric Urology

Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES

Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology

221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

C. F. SKRIPKA, JR, MD, FACS

Urology, Andrology & Neurourology

1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

DIRECTORY RATES & DATA: Space is available to TMA members at $42.00 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Staff Psychiatrist—Opening for staff psychiatrist in largely geropsychiatric, JCAH and Medicare accredited hospital. Salary up to $72,304 for board certified psychiatrist and up to $65,100 for board eligible psychiatrist. Patient census 430 to 450. Nineteen member medical staff includes nine psychiatrists and three neurologists. Excellent location in the Texas Hill Country, one hour from San Antonio. Good fringe benefits. Must have Texas license. Call or write G. W. Harrelson, Jr., MD, Clinical Director, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78029-1468; 512 896-2211. An EEO/AAP employer.

Cardiologist, group practice, 60 physician acute care, 140-bed Air Force Hospital with family residency program. Referrals from over 25,000 medical/surgical outpatient visits per month. All malpractice insurance paid. May be eligible for bonus pay and moving expenses. Practice in a brand new medical complex at Carswell AFB in Fort Worth, Texas. Minimum salary $55,255. Contact 817 735-7865.

Physician with Texas license needed to practice general medicine at Student Health Center. Forty hour week, Monday-Friday. Minimal call duty. Fringe benefits. Contact Sheila Meyer, Administrator, North Texas State University Health Center, P.O. Box 5158, Denton, Texas 76203. 817 565-2331. Equal opportunity/affirmative action employer.

Assistant Professor/Associate Director—Methodist Hospitals of Dallas Family Practice Residency Program, affiliate of The University of Texas Health Science Center at Dallas, seeks residency trained, board certified family physician with practice experience, broad clinical skills to include obstetrics. Responsible for operation of Family Practice Center, resident teaching and supervision. Research skills/interest strongly desired but not required. Salary and benefits competitive. Send reply and CV and cover letter and three references to Leonard W. Morgan, PhD, MD, Methodist Hospitals of Dallas Family Practice Residency Program, 3400 W. Wheatland Rd., Dallas, Texas 75237-3458. UTHSCD and Methodist Hospitals of Dallas are affirmative action, equal opportunity employers.

Faculty Position—The University of Texas Health Science Center and Parkland Memorial Hospital, Dallas, Texas are seeking a physician as Assistant Professor of Clinical Internal Medicine to be part of an expanding team and to help direct and coordinate clinical AIDS activities at the hospital. The physician will be involved in inpatient and outpatient care and will be expected to engage in clinical or epidemiological research. A subspecialist in infectious diseases is desired but applicants specialized in other relevant clinical disciplines are also encouraged to reply. Direct inquiries to James P. Luby, MD, Department of Internal Medicine, 5323 Harry Hines Blvd., Dallas, Texas 75235. UTHSCD and PMH are equal opportunity employers.

Assistant Professor/Program Director—John Peter Smith Hospital of Fort Worth, affiliate of The University of Texas Health Science Center at Dallas, seeks residency trained, board certified family physician with practice experience, broad clinical skills. Academic experience preferred. Responsible for resident teaching and supervision. Research skills and interest strongly desired. Salary and benefits competitive. Send inquiries and CV to William Ross, MD, Chairman, Department of Family Practice & Community Medicine, UTHSCD, 5323 Harry Hines, Dallas, Texas 75235-9067. Equal opportunity/affirmative action employer.

Physicians Postings Available—Come to beautiful NM, Land of Enchantment, great outdoors, clear skies, beautiful sunsets and work in a rewarding position at the University of New Mexico. Full time and half time work available working at Urgent Care Center, Emergency Department, and Detention Center. Benefits. Salary negotiable. Please contact UNM 505 277-5062 for more information or send CV to Department of Emergency Medicine, 620 Camino de Salud NE, Albuquerque, New Mexico 87131. EOE.

Physician/Medical Director—Full time family practice physician needed for a community/migrant health center. Experience in medical administration as well as clinical experience helpful. Board eligible or certified with Texas licensure preferred. Emphasis is on comprehensive ambulatory care, including OB care. Hospital in-patient care of registered patients required. The facility is located in a very pleasant rural community 85 miles southwest of San Antonio, Texas. Very competitive salary. Send CV or resume with references to Rachel A. Gonzales, Executive Director, Uvalde County Clinic, Inc., 1009 Garnerfield Road, Uvalde, Texas 78801.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas—Full-time ED positions available in North Texas area. Small group, flexible scheduling. ACLS and US education required. Send CV to Ms. Neu, Numed Systems, P.O. Box 2122, Denton, Texas 76202.

Texas, Abilene: Regional trauma center needs additional full-time emergency physicians. City of 100,000 within a 17-county referral area. Two universities and one college. Several area lakes. $90,000+/year. Contact: Helen Meyer, 8700 Crownhill Road. Suite 600, San Antonio, Texas 78209, 512 822-9811.

Texas, College Station: Immediate full-time positions available at a brand new facility. Home to Texas A&M University. Surrounded by national forests, state parks and lakes. Midsize town with good schools near major metropolitan areas. $89,000+/year with paid malpractice insurance. Contact: Helen Meyer, 8700 Crownhill Road, Suite 600, San Antonio, Texas 78209; 512 822-9811.

Texas, Weslaco—Full time position available at a Valley emergency department. Enjoy border shopping and beaches. Volume 13,000/year. $80,000-$100,000/year. Contact: Helen Meyer, 8700 Crownhill Rd., Suite 600, San Antonio, Texas 78209; 512 822-9811.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Family practice physician for 10-member multi-specialty group located in the Rio Grande Valley. Clinic has six family practice physicians. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Family practice physician (BC/BE) to associate with established FP in clinic in small, scenic Hill Country town near San Antonio. Primarily ambulatory/emergency practice with some surgery. Salary plus incentive. Partnership possible. J. E. McCoy, MD, 120 Medical Drive, Boerne, Texas 78006; 512 249-9307.

Raise your family in a friendly small town with the convenience of a large city just 30 miles away. Excellent schools. New hospital and new clinic needs a family practice physician interested in practicing medicine in West Texas. Contact Charles Butts, Administrator, Crane Memorial Hospital, 1310 S. Alford, Crane, Texas 79731; 915 558-3555.

Progressive rural community in northwestern Texas Panhandle looking for family practice physician. Lucrative future, fee-for-service practice with financial guarantees, plus benefit package. Three doctor group, fully staffed clinic, 30-bed hospital, 60-bed nursing home, strong Ag/Industrial area. Quality lifestyle, excellent school system, active churches. Contact Robert Neelley, President, Doctor Search Committee, P.O. Box 549, Friona, Texas 79035; 806 247-2706.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"
locum tenens & permanent placements

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

Dallas Vicinity—Immediate need for recently-trained, BC FP to associate with small FP group in northeast Texas community of 25,000. 67,000 in county. OB preferred. Modern, 150-bed hospital. Lucrative practice potential; generous incentive package; early partnership. Excellent lifestyle in family-oriented community; strong economy. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

San Antonio Vicinity—Seeking board certified FP desiring full range of family medicine, including OB. Modern hospital, new office space adjacent to hospital. No evening or weekend ER call required. Share call with young, BC FP. Excellent incentive package. Hunting mecca. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Rural Colorado—BC/BE family practitioner to join three FPs in growing multispecialty group. Excellent opportunity for person interested in rural living, mountain recreation, health care delivery for medically underserved populations. Send CV to Michael Bloom, 204 Carson Avenue, Alamosa, Colorado 81101; 303 589-5161.

Family Physician—(BC, BE) to join established family clinic in the beautiful area of East Texas. Quality of life is excellent. Good practice opportunity with above average financial package. Send CV to Jerry Chapman, Glenwood Clinic, 1400 College Drive, Texarkana, Texas 75503; 214 793-5671.

Dallas Area—Immediate need for recently trained BC FP to associate with 21-person multispecialty group. Shared call. No OB. Modern, 90-bed hospital adjacent to professional office building. Competitive salary plus benefits, early association. For information without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Family practice physician needed BC/E, as associate for busy FP office. No investment, salary, malpractice paid. Service area population 90,000 and growing. 112 bed full service hospital. CA license required. Located in Central California, Tulare offers family oriented environment, abundant outdoor recreation, attractive RE prices, good schools, shopping, restaurants, etc. Easy access to all California attractions. Please send CV to Tulare District Hospital Physician Recruiting Office, P.O. Box 90112, Los Angeles, California 90009 or call 213 216-2687.

Family/General Practice—Immediate opportunity to join a rapidly growing practice in southeast Dallas. Very attractive clinic across the street from hospital. Contact Robert N. Silva, MD, 214 391-1158.

Houston—Family practice opportunity for bilingual MD (Spanish/English) in the Houston metropolitan area. Good opportunity for qualified person. No investment necessary. Send resume to P.O. Box 112072, Houston, Texas 77215.

Small FP group seeks recently trained, BC associate for practice in Panhandle community of 25,000 (service area population 75,000). Modern hospital. Competitive incentive package. Many area amenities. Easy access to Amarillo and airport. For information, without cost or obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Northeast Texas—Near D/FW Metroplex. Immediate need for BE/BC family physicians in rural communities. Solo with coverage or associate practice. Modern hospitals. Many lakes and recreational activities. Easy access to amenities of Dallas/Fort Worth. Incentive package. Please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Family practice and obstetrician-gynecologist, board certified or eligible. Multispecialty group. Surrounding population 30,000. Excellent first year guarantee plus bonus with fringe benefits. Partnership in one year; token buy-in. Contact John M. Johnson, MD, Family Diagnostic Medical Center, 101 Circle Drive, Hillsboro, Texas 76645. Phone number 817 582-3401.

Family practitioner needed for busy, well-established primary care practice. Join two family physicians in Lubbock, Texas. Terms are negotiable. Please send curriculum vitae to Maureen Bragg, Summit Health Ltd., 1800 Avenue of the Stars, Suite 1200, Los Angeles, California 90057, or call (collect) at 213 201-4000.

Family Physician—Hansford County Hospital, Spearman, located in the Panhandle, has an immediate opening for a family practice physician. Office space available, salary guarantee and moving expenses. 28 bed facility with 84 bed nursing home attached. Contact Albert La Rochelle, Administrator, 707 S. Roland, Spearman, Texas 79081; 806 659-2535.

Family physician needed to work for another physican in Edna, Texas to provide medical services to patients including internal medicine, pediatrics, ob/gyn, minor surgery and geriatrics. Comprehensive medical services for members of family on continuing basis. Examine patients; elicit and record information about patients' health, order or execute various tests and x-rays on patients' condition. Analyze, report and diagnose condition, administer treatments and medications. Vaccinate patients to immunize them from communicative disease. Refer patients to specialists when necessary. Must have MD diploma plus one year internship. Salary $50,000 per year, 40 hours per week. Apply at the Texas Employment Commission, Victoria, Texas, or send resume to Texas Employment Commission, TEC Building, 1117 Trinity St., Austin, Texas 78778. J.O. #4793796. Ad paid for by an equal employment opportunity employer.

Internal Medicine

Progressive Central Texas community of 5,600 (within one hour of Austin) seeks BE/BC general internist. Modern hospital; competitive incentive package including income guarantee, professional office space, etc. Award winning schools. Excellent lifestyle in family-oriented community; good economy. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

BE/BC general internist for associate practice in Panhandle community of 25,000 (service area population). Modern 126-bed hospital. Competitive incentive package. Many area amenities and recreational activities. Easy access to Amarillo and airport. For information, without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Austin Vicinity—Busy internal medicine practice available in popular community. Fourway shared call coverage. Established practice with proven capability to generate lucrative income in a desirable community offering an excellent lifestyle. Includes all equipment and furnishings. Reasonable price and terms. Contact Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Dallas Area—Immediate need for recently trained, BE/BC general internist to associate with 21-person multispecialty group. Shared call. Modern, 90-bed hospital adjacent to professional office building. Competitive salary plus benefits, early association. For information, without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Internist needed BC/E—Associate with busy OBG in new Women's Comprehensive Health Care Center. Ground-floor opportunity, salary, malpractice paid. Growing service area population currently 90,000. 112 bed full service hospital. In Central California, Tulare offers family environment, abundant outdoor recreation, beautiful homes attractively priced, good schools, restaurants, shopping. Easy accesss to all California attractions. Contact: Tulare District Hospital Physician Recruiting Office, P.O. Box 90112, Los Angeles, California 90009; 213 216-2687.

Internist with or without cardiology needed for busy office. Opportunities are unlimited for hard-working and caring physician who wants to do better than average. Terms are negotiable with option to take over practice in three to seven years. Call 214 586-0776 or write Vincent H. Wang, MD, 1005 S. Jackson, Jacksonville, Texas 75766.

Internal medicine associate needed to replace retiring member of four member internist group. Pleasant, active primary care practice with considerable hospital and consultation activity. Enjoyable community of over 100,000, with outstanding medical facilities. Contact Drs. Pratt, Davis, Thomas & Snyder, P.O. Box 5757, Beaumont, Texas 77702; 409 898-2994.

Internist: Strong interest in cardiology for 25K southeast Texas community. Many outdoor/recreational amenities with access to metro city. Compensation/benefits package: $100K+ minimum guarantee plus percentage, malpractice, office space built to specifications, CME allowance, relocation. Solo or single specialty group. Contact Bobby Sweat, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 30350. Call 404 641-6411.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking BC/BE OBG to join expanding OBG practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

OBG physician for 10-member multispecialty group located in the Rio Grande Valley. Clinic has two OBG physicians, one of which will be reducing workload in 1987. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Fort Worth Vicinity—Immediate need for BE/BC OBG. Attractive, affluent community; strong economy. Recreational mecca. Modern hospital. Share call with young, American-trained, BC OBG. Competitive incentive package. Easy access to D/FW. For information, without cost or obligation, contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

OBG, Houston, Texas—Solo practitioner seeking partner. Supported by 200+ bed hospital with strong maternity, community awareness, marketing programs. Compensation $120K salary plus percentage, paid malpractice, health insurance, profit sharing, pension plan, relocation, CME, vacation. Coverage. Contact Bob Sweat, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 30350. Call 404 641-6411.

Central Texas—Immediate need for two BE/BC OBGs. Adjacent communities seek two OBGs to accommodate lucrative market in rural Central Texas communities. Need cooperative effort to share call, and render badly needed services. Modern hospitals. Competitive incentive packages. Excellent lifestyle in family-oriented communities. For information, without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

OBG Needed BC/E—Associate with busy OBG in new Women's Comprehensive Health Care Center. Ground-floor opportunity, salary, malpractice paid. Growing service area population currently 90,000. 112 bed full service hospital. In Central California, Tulare offers family environment, abundant outdoor recreation, beautiful homes attractively priced, good schools, restaurants, shopping. Easy access to all California attractions. Contact: Tulare District Hospital Physician Recruiting Office, P.O. Box 90112, Los Angeles, California 90009; 213 216-2687.

Sunlife OB/GYN Services is a hospital based physician group providing high quality obstetrical and gynecological care. Rapid growth has created career opportunities for OBG trained physicians in Florida, Virginia, and Georgia. We offer excellent compensation, attractive scheduling, career advancement, and procurement of professional liability insurance. To explore these opportunities, please call Jane Senger, USA 1-800-258-9234 or NC 1-800-672-3340.

Dallas—OBG office, 1,500 sq. ft. newly finished out. Fully equipped. Active OBG practice, gross $250-$300K/year. For sale-lease, very flexible terms available. This is a turnkey opportunity. Call evenings 214 221-4055 or write OB Associates, 309 Tanglewood, Lewisville, Texas 75067.

Orthopedic Surgery

Wanted—Board qualified orthopedic surgeon with training in hand surgery to work in orthopedic group in West Texas city. Ultimate full partnership planned. Medical school affiliation possible. 806 799-1380.

Orthopedic Surgeon—Immediate need for BE/BC physician to serve two adjacent Central Texas communities. Group or solo with call coverage. Modern hospital equipment and facilities. Competitive incentive package, including income guarantee, office space, etc. Progressive communities. Great schools. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Opportunity for a board certified/eligible orthopedic surgeon, university trained, to join busy five man general orthopedic practice. Good location offering a good family atmosphere and recreational opportunities. Service area of 150,000 with an excellent medical community including subspecialty backup. Competitive salary and benefits with future partnership possible. Send inquiries with CV to Ad-679, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Pediatrics

Pediatrician, Brownsville, Texas—Vacation area near the ocean and Mexico. Enjoy practice in a modern, spacious, custom built clinic with lab, x-ray. Pleasant hours, good beginning salary. Contact Adele Bromiley, MD, 2335 Central Blvd., Brownsville, Texas 78520; 512 546-3126.

Dallas Area—Established general pediatric practice for sale. Grossing in excess of $270,000 per year. Shared call coverage. Includes all equipment and furnishings. Reasonable price and terms. Across street from modern hospital. For information without cost or obligation contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Radiology

Locum tenens, diagnostic radiologist needed to work in Laredo, Texas. Contact G. Salinas, MD, 1616 Logan, Laredo, Texas 78040.

Diagnostic Radiologist—Position for board certified/eligible radiologist with experience in US, CT, nuclear medicine, mammography, angiography and interventional radiology. Join group serving clinic and two community hospitals in Central Texas. Salary leading to partnership. Reply to 2027 S. 61st, Suite 116, Temple, Texas 76501; 817 774-9994.

Radiologists are needed for a variety of positions in Texas as well as other states. Opportunities exist in the areas of locum tenens, practice trials and permanent placement. For more information call toll free 1-800-531-1122 or write Kenneth W. Teufel, MD, PRN, Ltd., One Thousand North Walnut, Suite A, New Braunfels, Texas 78130.

Diagnostic Radiologist—Immediate need for recently trained, BC physician to associate with established radiology group serving regional medical center. All modalities, including MRI and Interventional radiology. Family-oriented community; strong economy. Easy access to D/FW. Excellent incentive package; early partnership. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Immediate need for BE/BC diagnostic radiologist in northeast Texas community of 25,000, near D/FW Metroplex. Modern 150-bed hospital. All modalities except MRI. Strong economy, family oriented community. Many lakes and recreational activities. Incentive package. Please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Immediate need for board certified radiologist. Salaried position. Near Dallas. Regular hours. Limited call. Contact J. Edwards, 3300 NW 23rd, Oklahoma City, Oklahoma 73107; 405 340-8888.

Other Opportunities

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, OBG, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Joyce Staffel, Medical Division, JSI, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-0475.

Immediate Opening: Excellent opportunity for a specialist in FP, OBG, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. Board certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, Gonzaba Medical Group, 720 Pleasanton Road, San Antonio, Texas 78214.

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 7820S.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar 8lvd., Austin, Texas 78701. Call 512 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for BC or 8E physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. 8ox 2000, Edinburg, Texas 78539; 512 383-1481.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include OBG, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-8080; or send CV to Mitchell & Associates, Inc., P.O. 8ox 1804, Scottsdale, Arizona 85252.

Full and part-time experienced physicians for established and expanding family care clinic in Northwest Houston. Excellent remuneration and working conditions; flexible scheduling. Contact Director, Medical Center, 792S FM 1960 West, Houston, Texas 77070; 713 469-4S60.

Expanding 20-physician multispecialty group has excellent opportunity for the following specialists: family practitioner, pediatrician, O8G, orthopaedic surgeon, and dermatologist. High beginning guaranteed salary in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Administrator, Malone and Hogan Clinic, 1S01 West 11th Place, 8ig Spring, Texas 79720.

Great Texas Opportunities—Substantial income guarantees, free office space, MP insurance paid. Large cities, suburbs, large-small towns. FPs, OBGs, PDs, IMs, NSs, GPs. Call or send CV to Nancy McEntire, CPC or Ray Carter, McEntire Carter Associates, 9S00 Jollyville Road, #142, Austin, Texas 78759; S12 345-7327.

Otolaryngologist—Immediate opportunity for BE/8C physician in Northeast Texas community of 27,000 (service area pop. 1S0,000) regional medical center. Quality lifestyle in area with strong economy; easy access to D/FW Metroplex. Shared call coverage; incentive package available. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 59S-1128.

Neurosurgeon—Immediate opportunity for 8E/BC physician with regional medical center in Northeast Texas (service area population 150,000). State-of-the-art technology available; large referral base. Quality lifestyle in a community with strong economy; easy access to D/FW Metroplex. Incentive package. Contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 59S-1128.

Wanted—A few good physicians (OBG, family practice, internal medicine, general surgery, and orthopedics) for select locations in Central Texas communities. Competitive physician assistance packages available for private practice opportunities. Call Johnny 8urns, Senior Vice President, HealthStar Corporation, 3555 Timmons, Suite 700, Houston, Texas 77027; 1-800-627-2145 or 713 627-214S.

Cardiologist—Invasive/non-invasive BC/BE to join two 8C cardiologists located in southwest Houston. Good salary, fringe benefits, partnership after two years. Send CV to P. McKenzie, 1919 Land Mark, Richmond, Texas 77469.

Psychiatrist—Small, progressive hospital outside Dallas/Fort Worth to assist/develop a strong practice dealing with a variety of psychiatric modalities, affiliated with their 15-bed Mental Wellness Unit. Board eligible/certified psychiatrist considered. Income guarantee, relocation, call/coverage, new facilities, pleasant lifestyle are included. Contact Mary Wynkoop, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 303S0; call 404 641-6411.

Pulmonary internist needed BC/E for excellent opportunity to establish private practice with no investment, guaranteed income. Service area population 90,000 and growing. 112 bed fully staffed hospital, excellent ancillary services. Some internal medicine necessary initially. Located in Central California, Tulare offers family oriented environment, abundant outdoor recreation, beautiful homes attractively priced, good schools, shopping, restaurants, etc. Easy access to all California attractions. Please send CV to Tulare District Hospital Physician Recruiting Office, P.O. 8ox 90112, Los Angeles, California 90009 or call 213 216-2687.

Oncologist needed BC/E for excellent opportunity to establish private practice with no investment, guaranteed income. Service area population 90,000 and growing. 112 bed fully staffed hospital, excellent ancillary services. Some internal medicine necessary initially. Located in Central California, Tulare offers family oriented environment, abundant outdoor recreation, beautiful homes attractively priced. Good schools, shopping, restaurants, etc. Easy access to all California attractions. Please send CV to Tulare District Hospital Physician Recruiting Office, P.O. Box 90112, Los Angeles, California 90009 or call 213 216-2687.

Dermatologist needed, BC/E—Excellent opportunity to establish private practice with no investment, guaranteed income. Growing service area now 90,000—proven income potential. 112 bed full service hospital. In Central California, Tulare offers family environment, beautiful homes attractively priced, good schools, restaurants, shopping. Easy access to all California attractions. Please send CV or call: Tulare District Hospital Physician Recruiting Office, P.O. 8ox 90112, Los Angeles, California 90009; 213 216-2687.

Gastroenterologist—Immediate practice opportunity available in beautiful and vivacious Nacogdoches. County population in excess of S0,000 in the Piney Woods of East Texas. Assistance is available for establishing a practice. If interested, contact Richard McClarney at 409 S64-4611.

Pulmonologist—Immediate practice opportunity available in beautiful and vivacious Nacogdoches. County population in excess of S0,000 in the Piney Woods of East Texas. Assistance is available for establishing a practice. If interested, contact Richard McClarney at 409 S64-4611.

Director—New, $2.5 million cancer center needs hematologist/medical oncologist to direct regional program and practice. Supported by 200+ bed hospital w/100K drawing area, located in southern Louisiana. Local outdoor recreational activities, only 45 minutes to Gulf coast. Competitive compensation package. Contact Jim Davis, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 303S0. Call 404 641-6411.

Neurosurgeon—200+ bed hospital in southern Louisiana (100K drawing area) needs surgeon to develop practice. Array of outdoor recreational activities and only 45 minutes to Gulf coast. Strong compensation package. Contact Jim Davis, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 303S0. Call 404 641-6411.

Robert William James & Associates—Your medical connection across Texas and the US. Multiple, current, physician needs in all specialties. Staff, group and solo. Contact: Marlys Whitley, Medical Recruiter, 817 776-7782 or write P.O. Box 8136, Waco, Texas 76714 (5201 Sanger) for details.

Prosperous, expanding multispecialty group in choice rural area of Central Texas is seeking an additional general surgeon. Salary with incentive bonus opportunity. Excellent benefits. Independent fee-for-service 22 physician group with drawing area of 100,000 plus. Send CV to William Schlotter, Brenham Clinic Association, PA, 600 N. Park, Brenham, Texas 77833.

Excellent Texas opportunities in cardiology, ENT, family practice, general practice, general surgery, internal medicine, OBG, oncology, orthopedic surgery, pediatrics, vascular surgery to practice in one of several lake area communities in the beautiful Piney Woods area of East Texas. Excellent quality of life, first year guarantee, etc. Other Texas opportunities available also. Reply with CV or call Armando L. Frezza, Medical Support Services, 8806 8alcones Club Dr., Austin, Texas 78750; S12 331-4164.

OPPORTUNITIES SOUGHT

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar 8lvd., Austin, Texas 78701. 512 477-6704, ext. 263.

53-y/o American-born and trained FP with stable background in private practice and industrial medicine, seeks solid practice opportunity. Open to setting. No OB or surgery. Prefer small town near metropolitan area (family in Houston). Please reply to Ad-680, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Board eligible internist completing residency seeks position in the Houston area, available August 88. Will consider group practice or associate practice. Please reply to Ad-682, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

OBG—US graduate with Texas residency in OBG. Board certified and fellow in ACOG with 14 years experience seeking a practice locale. Prefer association or partnership with other OBG or clinic with coverage. Contact Dick Cunningham, MD after 6 pm, 713 376-9062.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. Save more than S0% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 18164, Dallas, Texas 7S218; 214 369-3960; Metro 229-92S3.

Wanted—Used mammographic, ultrasound or x-ray equipment. Call Dr. Vancura, 817 774-9994; 2027 S. 61st, Suite 116, Temple, Texas 76S01.

Picker Echoview 80-L articulated arm gray scale ultrasound unit, $4000 or best offer. Call 817 778-259S, Temple, Texas.

Hewlett-Packard defibrillator, electrocardiograph on cart. EKG model 1500B, monitor 7830A, resuscitation system 78616A. Mint condition, S12 451-02S4, Mon/Fri 8/5.

Office Space/Property

San Antonio—Space available for sublease in South Park Mall adjoining established dental office. For further information contact Dr. Jack Tucker, S12 927-1111.

Gentlemen's Ranch—73 rolling acres, 85 miles east of Dallas, just off I-20. Two creeks, two large ponds, 90 percent in grasses and a quality ranch style home. $29S,000. Richard Howell, 8roker, P.O. 8ox 775, Lindale, Texas 7S771; evenings 214 882-4919.

Medical office space for lease in Duncanville. Ready to occupy, six exam rooms with sinks, reception area, records area, and private office. Two spaces available. Each area approximately 1,500 square feet. Below market rate. 214 296-2020, Jim Denning.

Ski Steamboat Springs, Colorado—Doctor's luxury condo, sleeps six, two baths, sauna, hot tub, cable TV, W8FP. Free shuttle to lifts (½ mile). Direct American Airlines flight from DFW. January 2-9, March 5-12. For details call 214 227-2324.

Practice For Sale—Dallas, Casa Linda/White Rock East area. Doctor retiring. Well established practice, excellent for internal medicine or family practice. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker. 214 327-7765.

For Sale—Family practice, West, Texas, very large clinic, room for two family practice doctors. High gross, excellent net. Six treatment rooms, well equipped. Osteopathic practice. Contact Gary Clinton, PMA, 214 327-776S. Practice Appraisals/Sales. Health care professional consultant for 14 years.

Established minor emergency clinic for sale to right practitioner/owner. Oklahoma college town. Growth potential excellent. Fully equipped including x-ray, film processor, lab. Remodeled facility is leased, great location. Excellent way to shorten hours, enjoy family practice. Reply to Ad-681, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Internist-FP to take over 34 year internal medicine practice. Retiring. Practice free. 1,700 sq. ft. modern building for sale at market price or can lease. Fully equipped, x-ray, full lab, EKG, tables, cabinets, typewriters, copying machines, at less than 20% replacement cost. Arrangements flexible. Roy Daugherty, MD, 4006 W. 33rd, Amarillo, Texas 79109; 806 3SS-7447.

Practices

Practice For Sale—Bryan. Doctor retiring for health reasons. Well established family practice. Excellent for internal medicine or family practitioner. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker. 214 327-7765.

Internist (MD)—Excellent opportunity to purchase a fully equipped office (building, equipment, and practice) in Central Texas. Facility can accommodate three to six doctors. Two minutes from new 109-bed hospital. Terms possible. Call Clarence Miller, 512 353-1125, leave word.

Dallas, Gynecology—Rewarding gynecological practice, Baylor Hospital area, offered by retiring physician. Board eligible or certified candidates only. Unusual benefits; attractive option to own office space in joint venture medical building. Please reply to Ad-651, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Practice for sale by the only neurologist. City of 75,000. Young medical community. Two board neurosurgeons; CT and MR. Unlimited clinical, EMG, and EEG opportunity. Inquiries to 804 Medical Circle Drive, Longview, Texas 75601; phone number 214 758-8466.

BUSINESS AND FINANCIAL SERVICES

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 75080. Contact Dan Lewis at 214 437-1180 office or 214 238-7129 evenings.

For residents, start-up practitioners, and established physicians—Unsecured signature loans $5,000-$60,000. No points or fees. Competitive rates, level payments. Up to six years to repay. Deferred principal option. No prepayment penalties. For information and application, call Austin 512 836-9126, MediFinancial, Harper, or 1-800-331-4952, MediVersal, Dept. 114.

We purchase delinquent receivable accounts outright at no recourse to seller. We pay up to 90% of face value. Fast courteous professional service. For information call Austin 512 836-9126 MediFinancial-Harper.

CONTINUING EDUCATION

1988 CME Cruise/Conferences on medicolegal issues and risk management—Caribbean, Mexico, Alaska, China/Orient, Europe, New England/Canada, Trans Panama Canal, South Pacific. Approved for 24-28 CME Cat. I credits (AMA/PRA) and AAFP prescribed credits. Distinguished lecturers. Excellent group rates on finest ships. Registration limited. Pre-scheduled in compliance with IRS requirements. Information: International Conferences, 189 Lodge Avenue, Huntington Station, New York 11746; 516 549-0869.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9291. (Formerly Home of the Holy Infancy)

Advertising Rates & Data: Regular classified advertising sells for $39. (US currency) per issue for 50 words or less, payable in advance. Display classified advertising sells for $70. per column inch, per month. A variety of typefaces, logos and borders may be used in display classified ads. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings cannot be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Federal laws prohibit references to race, color, religion, sex, national origin, or age unless bona fide occupational qualifications. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Texas Medical Association
121st Annual Session

Advertising Directory

American Physicians Insurance Exchange	**23**
American Physicians Life Insurance	**61**
Ayerst Laboratories	**56, 57, 58**
BMW Center	**4**
Burroughs Wellcome	**37, 38, 39**
Campbell Laboratories, Inc.	**22**
Ciba-Geigy	**13, 14**
Diagnostic Clinic of Houston	**26**
Family Practice Recertification	**2nd Cover**
I.C. System, Inc.	**25**
Insurance Corporation of America	**43**
Knoll Pharmaceutical	**17, 18**
Eli Lilly & Company	**36**
Marion Laboratories	**54, 55, 67, 68**
The Medical Protective Company	**65**
MEDS	**24**
Roche Laboratories	**1, 2, 16**
Scott and White Clinic	**22, Back Cover**
Southwest Medical Associates	**14, 22, 54**
Spring Shadows Glen	**2nd Cover**
Starlite Village Hospital	**14**
Texas Medical Association	
Memorial Library	64
Statement of Ownership, Management & Circulation	54
Texas Medical Association Insurance Program	**10**
Texas Medical Liability Trust	**3rd Cover**
Timberlawn Psychiatric Hospital	**Back Cover**
The Upjohn Company	**35**
Texas Physicians' Directory	**69–75**
Classified Advertising	**76–79**

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

COURSES

DECEMBER

Cardiovascular Disease

Dec 6-9, 1987
CORONARY, HYPERTENSIVE, VALVULAR AND MYOCARDIAL HEART DISEASES: THE MULTIDISCIPLINARY APPROACH. Williamsburg Conference Center, Williamsburg Lodge, Williamsburg, Va. Fee $335 members of American College of Cardiology, $420 nonmembers of ACC, $200 residents and fellows. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Dec 11-13, 1987
5TH ANNUAL ADVANCES IN HEART DISEASE. Hyatt on Union Square, San Francisco. Fee $350 members of American College of Cardiology, $415 nonmembers of ACC, $175 residents and fellows. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Chest Disease

Dec 11-12, 1987
PULMONARY INFECTIONS IN HOSPITALIZED PATIENTS. New Orleans Hilton Riverside and Towers, New Orleans. Fee $165 members of American College of Chest Physicians, $225 nonmembers. Category 1, AMA Physician's Recognition Award; 10 hours. Contact ACCP, PO Box 93826, Chicago, IL 60673 (312) 698-2200

Computer Applications

Dec 7-8 and Dec 10-11, 1987
COMPUTER APPLICATIONS: AN INTRODUCTORY WORKSHOP. Houstonian Hotel and Conference Center, Houston. Fee TBA. Credit TBA. Contact Robin Murray, The American College of Obstetricians and Gynecologists, 600 Maryland Ave, SW, Washington, DC, 20024-2588 (202) 638-5577, ext 343

Emergency Care

Dec 6-12, 1987
EMERGENCIES IN INTERNAL MEDICINE. Frenchman's Reef Resort, St Thomas, Virgin Islands. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Dec 16-17, 1987
ADVANCED TRAUMA LIFE SUPPORT. University of Kentucky Medical Center, Lexington, Ky. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Joy Greene, Continuing Medical Education, University of Kentucky, 132 College of Medicine Office Bldg, Lexington, KY 40536-0086 (606) 233-5161

Dec 18-19, 1987
TRAUMA UPDATE 1987. Hyatt Regency Hotel, Lexington, Ky. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Joy Greene, Continuing Medical Education, University of Kentucky, 132 College of Medicine Office Bldg, Lexington, KY 40536-0086 (606) 233-5161

Family Medicine

Dec 4-5, 1987
UPDATE OF MEDICAL AND SURGICAL MANAGEMENT OF GASTROINTESTINAL DISORDERS. Hyatt Regency Hotel, San Antonio, Tex. Fee $125, no charge for physicians in training with letter from program director. Category 1, AMA Physician's Recognition Award; 9 hours. Contact Kathleen O'Shea, Humana Hospital, 8026 Floyd Curl Dr, San Antonio, TX 78229 (512) 692-3545 ·

Dec 11-12, 1987
2ND ANNUAL PRIMARY CARE RESEARCH METHODS AND STATISTICS. Gunter Hotel, San Antonio, Tex. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

General Medicine

Dec 3-5, 1987
FALL SYMPOSIUM ON BACK PAIN. Fairmont Hotel, San Francisco. Fee TBA. Category 1, AMA Physician's Recognition Award; 16.5 hours. Contact American Back Society, 2647 E. 14th St, Suite 401, Oakland, CA 94601 (415) 536-9929

Infectious Diseases

Dec 5-6, 1987
2ND ANNUAL INFECTIOUS DISEASES SYMPOSIUM. Providence Memorial Hospital, El Paso, Tex. Fee $150 physicians, $75 residents, interns, students. Category 1, AMA Physician's Recognition Award; 12 hours. Contact Karen DeLong, Providence Memorial Hospital, 2001 N Oregon St, El Paso, TX 79902 (915) 542-6001

Internal Medicine

Dec 5, 1987
DIABETES MELLITUS: A PRACTICAL COURSE IN MODERN THERAPY. Westin Hotel, Dallas. Fee $75. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Ln, Dallas, TX 75231 (214) 696-8458

Obstetrics and Gynecology

Dec 2-4, 1987
19TH ANNUAL PERINATAL POSTGRADUATE COURSE. Ramada Renaissance Hotel, Jackson, Miss. Fee $250. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Ann Johnson, Division of Continuing Health Professional Education, University of Mississippi Medical Center, 2500 N. State St, Jackson, MI 39216-4505 (601) 984-1300

Ophthalmology

Dec 3-5, 1987
CONTACT LENS TECHNOLOGY. Stouffer's Greenway Plaza Hotel, Houston. Fee $275. Credit TBA. Contact Bette Burkett, Contact Lens Technology Course, Cullen Eye Institute, Baylor College of Medicine, 6501 Fannin, Houston, TX 77030 (713) 799-5942

Pathology

Dec 12, 1987
44TH ANNUAL PATHOLOGY SEMINAR: PROBLEMS IN LIVER PATHOLOGY. The University of Texas Health Science Center, San An-

tonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

Dec 3-6, 1987
INNOVATIVE AND CONTROVERSIAL STRATEGIES IN REHABILITATION. Sheraton Bal Harbour, Miami. Fee TBA. Credit TBA. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Dec 11, 1987
ROLE OF TECHNOLOGY IN TISSUE PRESSURE MANAGEMENT. Houston. Fee $75 before Nov 20, $90 after Nov 20. Credit TBA. Contact Marjorie Gordon, Division of Education, Institute for Rehabilitation and Research, 1333 Moursund, Houston, TX 77030 (713) 797-5944

Plastic Surgery

Dec 4-5, 1987
CONTEMPORARY CONCEPTS IN FACIAL SURGERY. Waldorf Astoria, New York. Fee $675, $350 residents. Category 1, AMA Physician's Recognition Award; 11 hours. Contact Francine Leinhardt, Course Coordinator, Manhattan Eye, Ear and Throat Hospital, 210 E 64th St, New York, NY 10021 (212) 838-9200 ext 2776

Dec 4-6, 1987
WORKSHOP—RECONSTRUCTIVE SURGERY OF THE HAND. Westchester Marriott, Tarrytown, New York. Fee $800 physicians, $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 20 hours. Contact the American Society of the Hand, 3025 S Parker Rd, Suite 65, Aurora, CO 80014 (303) 755-4588

Radiology

Dec 7-11, 1987
POSTGRADUATE WORKSHOP IN MRI AND SPECTROSCOPY. Baylor Center for Imaging Research, The Woodlands, Tex. Fee $1,000 physicians, $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 33 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Risk Management

Dec 18, 1987
A CASE STUDY APPROACH TO RISK MANAGEMENT AND MALPRACTICE. Sheraton Bal Harbour, Miami. Fee $175. Category 1, AMA Physician's Recognition Award; 6 hours. Contact the University of Miami School of Medicine, Division of CME D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Surgery

Dec 3-4, 1987
SURGICAL HEALTH POLICY AND FINANCE. The Waldorf Astoria, New York. Fee $400, $200 residents. Category 1, AMA Physician's Recognition Award; 14 hours. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

JANUARY

Cardiovascular Disease

Jan 12-17, 1988
FRONTIERS OF CARDIOLOGY 1988. Arapahoe Lodge, Winter Park, Colo. Fee $50. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Earl Beard, MD, Section of Cardiology, Kelsey-Seybold Clinic, 6624 Fannin, Houston, TX 77030 (713) 797-1551

Jan 11-15, 1988
19TH ANNUAL CARDIOVASCULAR CONFERENCE. Convention Center, Snowmass, Colo. Fee $375 members of American College of Cardiology, $470 non-members of ACC, $175 fellows and residents. Category 1, AMA Physician's Recognition Award; 23 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Internal Medicine

Jan 28, 1988
CURRENT TOPICS: CHOLESTEROL AND OTHER RISK FACTORS IN HEART DISEASE. Marriott Hotel-Medical Center, Houston. Fee $50 physicians, $25 non-Baylor College of Medicine fellows and residents. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Orthopedic Surgery

Jan 16, 1988
DIABETIC FOOT CONFERENCE. Location TBA. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Otolaryngology

Jan 31-Feb 5, 1988
SURGICAL ANATOMY AND TECHNIQUES OF THE TEMPORAL BONE. Validmar Jordan Laboratory, Dallas. Fee $675, $475 residents. Category 1, AMA Physician's Recognition Award; 46 hours. Contact Ann Hood, RN, 3600 Gaston Ave, Barnett Tower, #1105, Dallas, TX 75246 (800) 443-1762

Pediatrics

Jan 12-17, 1988
17TH ANNUAL PEDIATRIC POSTGRADUATE COURSE/PEDIATRIC UPDATE 1988. Camino Real, Puerto Vallarta, Mexico. Fee TBA. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Ann Boehme, Schneider Children's Hospital of Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

Radiology

Jan 25-29, 1988
ANATOMY FOR RADIOTHERAPY TREATMENT PLANNING. The University of Texas Health Science Center, San Antonio, Tex. Fee $650. Category 1, AMA Physician's Recognition Award; 36 hours. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Sports Medicine

Jan 21-23, 1988
15TH ANNUAL SPORTS MEDICINE SYMPOSIUM. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Urology

Jan 23-24, 1988
TRANSITIONAL CELL CARCINOMA OF THE URINARY TRACT. Teaching Center Auditorium, Long Island Jewish Medical Center, New Hyde Park, NY. Fee $250, $100 residents. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

FEBRUARY

Anesthesiology

Feb 7-18, 1988
BAY-CAP XI: TACO IV. Hawaii, Kauai, Maui. Fee $350 one meeting, $495 both meetings. Category 1, AMA Physician's Recognition Award; 34 hours. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Cardiovascular Disease

Feb 1-3, 1988
STATE OF THE ART: 2-D/DOPPLER AND COLOR FLOW IMAGING. Sheraton Tucson El Conquistador, Tucson, Ariz. Fee $400 members of American College of Cardiology, $465 non members of ACC, $285 residents and fellows. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Feb 11-13, 1988
2ND ANNUAL UCSD-SHARP MEMORIAL HOSPITAL INTERNATIONAL CARDIAC SYMPOSIUM: CLINICAL STRATEGIES IN COMPLEX VALVULAR HEART DISEASE. US Grant Hotel, San Diego. Fee $350. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Family Medicine

Feb 21-26, 1988
19TH FAMILY MEDICINE REVIEW/SESSION 1. Hyatt Regency Hotel, Lexington, Ky. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Joy Greene, Continuing Medical Education, University of Kentucky, 132 College of Medicine Office Bldg, Lexington, KY 40536-0086 (606) 233-5161

Geriatrics

Feb 15-17, 1988
RECENT ADVANCES IN GERIATRIC REHABILITATION 1988: WHAT IS IT? WHO NEEDS IT? WHAT WORKS? Holiday Inn at the Embarcadero, San Diego, Calif. Fee $295 physicians, $195 residents, $125 full-time or non-practicing students. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Office of Continuing Medical Education, University of California San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Feb 18-20, 1988
MANAGEMENT OF THE ELDERLY II. Sheraton Bal Harbour, Bal Harbour, Miami Beach, Fla. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Feb 27-28, 1988
9TH ANNUAL GERIATRIC MEDICINE: SELECTED TOPICS. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Neurology

Feb 2-7, 1988
NEUROLOGY UPDATE 1988. Sheraton Bal Harbour, Bal Harbour, Miami Beach, Fla. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Oncology

Feb 4-6, 1988
3RD INTERNATIONAL CONFERENCE ON MONOCLONAL ANTIBODY IMMUNOCONJUGATES FOR CANCER. Hotel Inter-Continental, San Diego. Fee $310 before Dec 1, $365 after Dec 1. Category 1, AMA Physician's Recognition Award; 19 hours. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, California 92093 (619) 534-3940

Feb 25-27, 1988
2ND INTERNATIONAL CONFERENCE ON INTRACAVITARY CHEMOTHERAPY. US Grant Hotel, San Diego. Fee $300. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Pathology

Feb 11-14, 1988
6TH ANNUAL CYTOPATHOLOGY REVIEW COURSE. Lincoln Hotel-Post Oak, Houston. Fee TBA. Category 1, AMA Physician's Recognition Award; 31 hours. Contact Tamara Greiner, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030

Plastic Surgery

Feb 26-28, 1988
BASIC RHINOPLASTY. The University of Texas Health Science Center, Dallas. Fee TBA. Credit TBA. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Urology

Feb 11-13, 1988
CALCULI UPDATE 1988. Acapulco, Mexico. Fee $250 members of AUA, $350 nonmembers. Category 1, Physician's Recognition Award; 16 hours. Contact Alice Henderson, 6750 West Loop South, Ste 900, Bellaire, TX 77401 (713) 665-7500

MARCH

Allergy

March 2-6, 1988
1988 PAN AMERICAN ALLERGY SOCIETY TRAINING COURSE AND SEMINAR. San Antonio, Tex. Contact Betty Kahler, PAAS, 229 Parking Way, Lake Jackson, TX 77566 (409) 297-5635 or (409) 297-4069

Cardiovascular Disease

March 27-30, 1988
PRACTICAL ASPECTS OF CARDIOVASCULAR DISEASE AND RENAL DRUGS. Walt Disney World, Fla. Contact Division of Continuing Medical Education D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Family Medicine

March 17-20, 1988
13TH ANNUAL FAMILY PRACTICE RECERTIFICATION REVIEW. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Geriatrics

March 13-16, 1988
GERIATRIC MEDICINE RECERTIFICATION REVIEW. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

March 19-26, 1988
THE BRITISH EXPERIENCE: A STUDY TOUR IN ENGLAND ON PUBLIC AND PRIVATE CARE INNOVATIONS FOR THE AGED. England. Contact Pat Ashton, Holbrook Travel, 3540 N. W. 13th St, Gainesville, Fla 32609 (800) 451-7111

Obstetrics and Gynecology

March 25-26, 1988
CURRENT CONCEPTS IN OBSTETRICS AND GYNECOLOGY. Houston. Contact Vicki Forgac, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-6020

Ophthalmology

March 18-20, 1988
CLINICAL ADVANCES IN OPHTHALMOLOGY FOR THE PRACTICING OPHTHALMOLOGIST/THE CULLEN COURSE 1988. Houston. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

March 25-26, 1988
10TH ANNUAL DALLAS SPRING OPHTHALMOLOGY SYMPOSIUM. Location TBA. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Ln, Dallas, TX 75231 (214) 696-8458

Otolaryngology

March 10-12, 1988
CURRENT CLINICAL CONCEPTS IN OTOLARYNGOLOGY. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Pathology

March 7-11, 1988
CURRENT CONCEPTS IN TOXICOLOGY. San Antonio, Tex. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

March 21-31, 1988
22ND COMPREHENSIVE REVIEW COURSE IN PHYSICAL MEDICINE AND REHABILITATION. Houston. Contact Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

APRIL

Orthopedic Surgery

April 13-17, 1988
INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Pediatrics

April 6-9, 1988
SYMPOSIUM ON RESPIRATORY TRACT INFECTION IN CHILDREN/8TH ANNUAL NATIONAL PEDIATRIC INFECTIOUS DISEASE SEMINAR. New Orleans. Contact Dept of Pediatrics, Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3439 or (214) 688-2166

April 15-16, 1988
PEDIATRIC POSTGRADUATE SYMPOSIUM/1988. Houston. Contact Lila Lerner or Vicki Forgac, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

April 5-9, 1988
CURRENT TOPICS IN GENERAL SURGERY. Kona, Hawaii. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

MAY

Family Medicine

May 16-20, 1988
12TH ANNUAL REVIEW COURSE IN FAMILY PRACTICE. Houston. Contact Vicki Forgac or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

May 28, 1988
FAMILY PRACTICE UPDATE. Location TBA. Contact Linda Spino, PhD, Dept of Family Practice and Community Medicine, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2134 or (214) 688-2166

Internal Medicine

May 23-27, 1988
ADVANCES IN INTERNAL MEDICINE. San Francisco. Contact Postgraduate Programs, Dept of Medicine, University of California, 505 Parnassus, M979, San Francisco, CA 94143-0120 (415) 476-5208

Ophthalmology

May 27, 1988
YAG/ARGON WORKSHOP FOR OPHTHALMOLOGISTS. Location TBA. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Ln, Dallas, TX 75231 (214) 696-8458

Orthopedic Surgery

May 6-8, 1988
SOUTHWESTERN ORTHOPEDIC SURGERY REVIEW. Location TBA. Contact June Bovill, Division of Continuing Education, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Pathology

May 19-21, 1988
CURRENT ISSUES IN SURGICAL PATHOLOGY, VII. Location TBA. Contact Ann Parchem, Division of Continuing Education, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Physical Medicine and Rehabilitation

May 5-7, 1988
6TH ANNUAL CHRONIC PAIN COURSE: EVALUATION AND MANAGEMENT. Houston Contact Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category I, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

Feb-April 1988/April 25-May 6, 1988
29TH ANNUAL POSTGRADUATE INSTITUTE FOR PATHOLOGISTS IN CLINICAL CYTOPATHOLOGY/SUBSPECIALTY RESIDENCY IN CLINICAL CYTOPATHOLOGY. Home Study Course A, Feb-April; In-Residence Course B, April 25-May 6, 1988. Johns Hopkins Medical Institutions, Baltimore, MD. Pre-registration must be accomplished before March 25, 1988. Contact John Frost, MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205 (301) 955-3522

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291
Dec 5, 1987, Saturday, 10 am to 12 pm
SECONDARY RHINOPLASTY. Viewing areas: Arlington Community Hospital, Arlington; Baptist Medical Center, San Antonio; Hillcrest Baptist Medical Center, Waco; Memorial South West Hospital, Houston; and Scott and White Memorial Hospital, Temple. Fee $100 ASPRS members, $40 residents and nurses, $150 nonmembers. Category 1, AMA Physician's Recognition Award; 2 hours. Contact the EF Teleplast Registrar, Plastic Surgery Educational Foundation, 233 N Michigan Ave, Suite 1900, Chicago, Ill 60601 (312) 856-1818

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

NOVEMBER

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Nov 11-12, 1987, St Paul Medical Center, Dallas
Nov 13-14, 1987, Texas Tech Regional Academic Health Center, El Paso
Nov 18-19, 1987, Marriott Hotel-Astrodome, Houston
Nov 20-21, 1987, Texas Tech University Health Sciences Center, Lubbock

DECEMBER

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Dec 2-3, 1987, Tarrant County Medical Society Headquarters, Fort Worth
Dec 4-5, 1987, Holiday Inn, Temple
Dec 8-9, Marriott Hotel-Astrodome, Houston
Dec 10-11, 1987, The University of Texas Health Science Center Medical School, San Antonio

CALENDAR OF MEETINGS ■Denotes Texas Meetings

NOVEMBER

21ST ANNUAL AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY CONGRESS AND SCIENTIFIC MEETING, Palm Desert, Calif, Nov 30-Dec 3, 1987. Contact Howard Silber, AACIA, PO Box 912-DTS, Omaha, NE 68101 (402) 551-0801

ALL AMERICAS HEALTH '87: INTERNATIONAL CONFERENCE AND EXHIBITION OF MEDICAL AND HOSPITAL EQUIPMENT, Tampa, Fla, Nov 15-18, 1987. Contact Tampa Convention Facilities Department (813) 223-8424

■AMERICAN ACADEMY OF OPHTHALMOLOGY ANNUAL MEETING, Dallas, Nov 8-12, 1987. Contact Bill Jenkinson, AAO, PO Box 7424, San Francisco, CA 94120-7424 (415) 561-8500

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS ANNUAL MEETING, Atlanta, Nov 8-13, 1987. Contact Henry Kawamoto Jr, MD, 2001 Santa Monica Blvd, Santa Monica, CA 90404 (213)829-0391

AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS ANNUAL MEETING, Atlanta, Nov 8-13, 1987. Contact Carol Lazier, ASPRS, 233 N Michigan Ave, Suite 1900, Chicago, IL 60601 (312) 856-1818

ASSOCIATION OF AMERICAN MEDICAL COLLEGES ANNUAL MEETING, Washington, DC, Nov 7-21, 1987. Contact Kathleen Turner, AAMC, 1 Dupont Circle, NW, Ste 200, Washington, DC, 20036 (202) 828-0400

ASSOCIATION OF MILITARY SURGEONS OF THE US 94TH ANNUAL MEETING, Las Vegas, Nov 8-13, 1987. Contact Convention Manager, AMSUS, PO Box 104, Kensington, MD 20895 (301) 933-2801

■M.D. ANDERSON HOSPITAL 31ST ANNUAL CLINICAL CONFERENCE/RECENT ADVANCES IN THE SYSTEMIC THERAPY OF GENITOURINARY MALIGNANCIES, Houston, Nov 11-14, 1987. Contact Office of Conference Services, Box 131, M.D. Anderson Hospital and Tumor Institute, 1515 Holcombe Blvd, Houston, TX 77030 (713) 792-2222

NATIONAL INSTITUTE ON HEALTH CARE LEADERSHIP AND MANAGEMENT MEETING, Tucson, Nov 17-20, 1987. Contact Sherry Mason, American Academy of Medical Directors, 4830 W Kennedy Blvd, Suite 648, Tampa, FL 33609-2517 (813) 873-2000

■**TEXAS MEDICAL ASSOCIATION INTERIM SESSION**, Austin, Nov 20-21, 1987. Contact Robert Mickey, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

DECEMBER

AMERICAN MEDICAL ASSOCIATION INTERIM MEETING, Atlanta, Dec 6-9, 1987. Contact Felix Niespodziewanski, AMA, 535 N Dearborn St, Chicago, IL 60610 (312) 645-4597

◆ TMLT ◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS
MEDICAL
LIABILITY
TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

SCOTT&WHITE

Texas A&M University
College of Medicine

UPDATE IN PELVIC AND VAGINAL SURGERY

FOUR SEASONS HOTEL
SAN ANTONIO, TEXAS

November 4-6, 1987

Third Annual
WOMEN'S HEALTH CARE CONFERENCE
for the Primary Care Physician
and
(Texas A&M University vs University of Arkansas)
FOOTBALL WEEKEND
Lecture Hall I
Texas A&M University
College of Medicine Campus
College Station, Texas

November 13-14, 1987

For more information or to register contact: Office of Continuing Medical Education, (817) 774-4073, Scott and White, Temple, Texas 76508.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

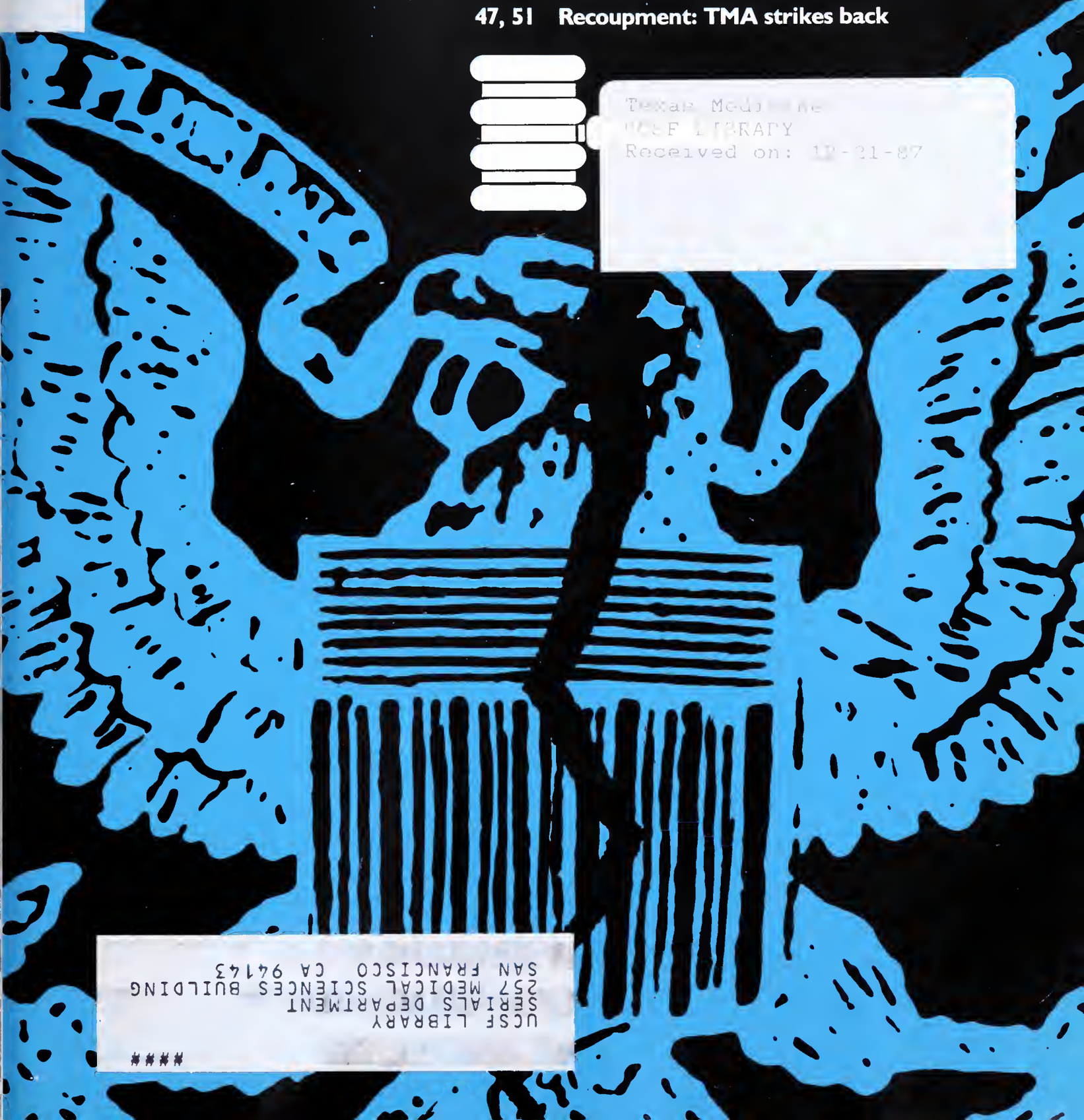
- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology, Neuropsychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223; 214/381-7181; 1-800-426-4944

ECEMBER 1987

Texas Medicine

5 AIDS testing affects both patient and physician
5 New this month: More on the subjects
22 The 'new morbidity' disorders in children
27 All-terrain vehicle accidents
47, 51 Recoupment: TMA strikes back



RRENT
LS
7

Texas Medicine
UCSF LIBRARY
Received on: 12-21-87

UCSF LIBRARY
SERIALS DEPARTMENT
257 MEDICAL SCIENCES BUILDING
SAN FRANCISCO CA 94143

####

Our team includes you.

At Spring Shadows Glen, we consider the referring professional an integral part of the treatment team. We value your knowledge, skills and expertise, and encourage you to work directly with your patient throughout hospitalization. We coordinate and integrate your work with the care provided by our own experienced and dedicated staff, striving for the best treatment available for your patient. And we refer the patient back to you for follow-up services, upon discharge from Spring Shadows Glen.

Our comprehensive psychiatric hospital offers both inpatient and partial hospitalization programs for emotional and behavioral problems, eating disorders, and alcohol/drug abuse. For additional information about the hospital, call Spring Shadows Glen.

Spring Shadows Glen
A Comprehensive Psychiatric Hospital
A Division of Memorial City Medical Center

2801 Gessner, Houston, Texas 77080 (713) 462-4000

AIM HIGH

PHYSICIAN SPECIALISTS.

The Air Force can make you an attractive offer—outstanding compensation, better working hours plus opportunities for professional development. You can have a challenging practice and time to spend with your family. Find out what the Air Force offers a specialist up to age 58. Call

Dallas, TX (817) 640-6469 Collect
Houston, TX (713) 661-5711 Collect
San Antonio, TX (512) 341-6802 Collect

AIR FORCE

In acute and chronic edema due to CHF

FOR PREDICTABLE CONTROL

- **Less potassium loss for a given amount of sodium excretion than with furosemide[1-3]**
- **Predictable dose response[4]**
- **Diuresis completed hours faster than with furosemide after oral dosing[5]**
- **Better GI absorption[6,7]**
- **Early evening dosing helps prevent nocturnal dyspnea**

As with all loop diuretics, excessive doses of BUMEX can lead to profound diuresis with water and electrolyte depletion, including hypokalemia, so serum electrolytes should be monitored.

Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

References: 1. Flamenbaum W: *Am J Cardiol 57*(2):3BA-43A, 19B6. **2.** Brater DC, Fox WR, Chennavasin P: *J Clin Pharmacol 21*: 599-603, 1981. **3.** Iber FL, Baum RA: *J Clin Pharmacol 21*: 697-700, 19B1. **4.** Henning R, Lundvoll O: *Eur J Clin Pharmacol 6*: 224-227, 1973. **5.** Physicians' Desk Reference, 40th ed. Orodell, NJ, Medical Economics Company, 1986, pp 939, 14B0. **6.** Pentikainen PJ, *et al: Br J Clin Pharmacol 4*: 39-44, 1977. **7.** *Losix, A Review.* Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 19B0

BUMEX®
(bumetanide/Roche)
0.5-mg, 1-mg and 2-mg scored tablets
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome
Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.
Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity
CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment
WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels.
Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.
Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use. Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.
HOW SUPPLIED: *Tablets:* 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Paks of 30, Tel-E-Dose® cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg— ROCHE BUMEX 2
Ampuls, 2 ml, 0.25 mg/ml, boxes of ten.
Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

PI 098S

Roche Laboratories
a division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

In acute and chronic edema due to CHF

A DIURETIC THAT GIVES YOU PREDICTABLE CONTROL

Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

Please see adjacent page for references and summary of product information.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

TexasMedicine

VOLUME 83 DECEMBER 1987

Contents

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION

William Gordon McGee, MD, El Paso
Chairman

Drue O. D. Ware, MD, Fort Worth
Vice Chairman

J. Forrest Fitch, MD, McAllen
Secretary

James M. Graham, MD, Austin
Harold R. High, MD, Cuero
Joseph T. Painter, MD, Houston
Elgin W. Ware, Jr, MD, Dallas

TMA OFFICERS

David Vanderpool, MD, Dallas
President

E. Rubin Bernhard, MD, San Antonio
Vice President

Val F. Borum, MD, Fort Worth
President Elect

Betty P. Stephenson, MD, Houston
Treasurer

Margie B. Peschel, MD, Fort Worth
Secretary

Robert G. Mickey, Austin
Executive Vice President

EDITORIAL STAFF

1801 N Lamar Blvd, Austin 78701
Telephone (512) 477-6704

Rae Vajgert, Managing Editor
Jim Busby, Articles Editor
Donna B. Jones, News Editor
Kathy Trombatore, Production Manager/ Editorial Assistant
Patty Illich, Administrative Secretary/ Production Assistant

ADVERTISING STAFF

1801 N Lamar Blvd, Austin 78701

Jon R. Hornaday, Advertising Director
Anne Grubbs, Advertising Manager

EDITORIAL COMMITTEE

John A. Mangos, MD, San Antonio
Chairman
Peter C. Canizaro, MD, Lubbock
William J. deGroot, MD, Galveston
Don E. Flinn, MD, Lubbock
Marvin Forland, MD, San Antonio
Frank H. Gardner, MD, Galveston
Glen E. Journeay, MD, Austin
Norman M. Kaplan, MD, Dallas
Irwin Krakoff, MD, Houston
Kenneth L. Mattox, MD, Houston
L. Charles Powell, Jr, MD, Galveston
Irving A. Ratner, MD, San Antonio
Alice L. Smith, MD, Dallas
Ciro V. Sumaya, MD, San Antonio
David A. Swanson, MD, Houston
Luther B. Travis, MD, Galveston
Paul R. Young, MD, Galveston

SUBSCRIPTIONS

1801 N Lamar Blvd, Austin 78701
c/o Business Office

Texas Medicine (ISSN 0040-4470) is published monthly by the Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701.

Subscription rates are: Members, $16 per year; nonmembers and institutions, $20 per year; foreign, $24 US currency; single copy, $2 plus $.16 sales tax

Second class postage paid at Austin, Texas, and additional mailing office.

Postmaster: Send address changes to Texas Medical Association, c/o Membership Department, 1801 N Lamar Blvd, Austin, TX 78701.

The articles published in *Texas Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Texas Medical Association.

Publication of an advertisement is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Copyright © 1987 by the Texas Medical Association. Owned and issued monthly by the Association.

Postmaster: Please direct correspondence to Rae Vajgert, Managing Editor, 1801 N Lamar Blvd, Austin, TX 78701.

ARTICLES

22 Management of children with 'new morbidity' disorders
Nathalie A. Vanderpool, MEd; Billy U. Philips, PhD, MPH; Warren F. Dodge, MD

27 All-terrain vehicle accidents
Mark J. Kubala, MD; Carl E. Shrontz, MD

32 Suprofen-induced acute renal failure
Patricio A. Pazmiño, PhD, MD

34 Complications of intramuscular glucocorticoids
Tom Youngblood, MD; Anita Cavallo, MD; Arnold S. Goldman, MD; George T. Bryan, MD; Walter J. Meyer III, MD

37 Hirschsprung's disease: a difficult diagnosis
Samuel L. Seaman, PhD; Patty Goodwin, MS; J. Daniel, MD; Argye Hillis, PhD

40 Pediatricians' views: "latchkey" children, corporal punishment
Patrick C. Kelly, DO, MAJ, MC; Michael R. Weir, MD, COL, MC; Ronald G. Fearnow, MD, COL, MC

EDITORIALS

5 AIDS testing has dramatic impact on physicians, patients alike
Daniel J. Ladd, MD

5 "More on the Subjects"

FEATURE

47 Recoupment: Fear, confusion, and a court date
Donna B. Jones

MEDICINE AND THE LAW

51 Medicare recoupment of alleged "overpayments"
Donald P. "Rocky" Wilcox, JD

NEWS

TMA in action
9 District judge halts collection of alleged overpayments
9 AMA delegates in Atlanta for interim meeting
9 Houston authors win award for *Texas Medicine* article
10 Guide links Texas blood banks willing to respond to disasters
10 CME opportunities expand with accreditation program
10 Award honors media coverage of health topics
12 San Antonio's charm beckons as annual session approaches

Health line
12 Datafiles now on-line from Texas Cancer Data Center
12 American Heart Association issues Blueprint for Health
12 Syphilis test required for pregnant women and newborns

Socioeconomics
13 HCFA to release data on hospital mortality to public
13 HCFA to monitor compliance with elective surgery rules
13 TMF changes requirement for cataract surgery

Capital comments
13 Interim legislative studies focus on health care issues
15 AMA explains 19.9% rise in Part B costs for 1986
15 Newsmakers

DEPARTMENTS

6 Letters
43 More on the subjects
45 Information for authors
46 Clinical abstracts
55 Deaths
59 Medicine in literature
72 Continuing education directory

ON THE COVER

TMA and 20 other plaintiffs were granted a preliminary injunction in a suit against the US Department of Health and Human Services and Blue Cross and Blue Shield of Texas, over the federal government's effort to recoup $14 million from physicians and patients for alleged "overpayments." This month's feature article (page 47), written by Donna B. Jones, news editor of *Texas Medicine,* explores the moral and economic issues surrounding the recoupment effort. "Medicine and the Law" (page 51), written by Donald P. "Rocky" Wilcox, JD, summarizes the facts leading up to the suit and explains the legal basis for the suit. Cover design by Ed Triggs.

COMING NEXT MONTH

Scheduled for the January issue of *Texas Medicine* are articles on the association of intracranial hemorrhages with organic acidemias, Ondine's curse, determining supportive care only status, and acute renal failure secondary to intravenous pyelography in a child

American Physicians Insurance Exchange

MALPRACTICE

It's an allegation that can happen to anyone.

You don't have to stand alone!

We wrote the book on malpractice insurance. We started writing professional liability insurance over 12 years ago, when the other insurance companies were looking for a way out.

Why? Because we're 100% owned and controlled by dentists and physicians. We know you can't operate your practice without malpractice insurance.

We know a good insurance company must insure *all* specialties. And we have never settled a claim without an insured's written consent. We believe that you shouldn't have to stand alone. If you're concerned about your insurance company's commitment to you, give us a call today.

1301 Capital of Texas Highway, Suite #B-300
Austin, Texas 78746
(512) 328-1520

Nationwide 1-800-252-3628

In San Antonio:
Bill Sweet
(512) 497-3205

AIDS testing has dramatic impact on physicians, patients alike

In two short years, the test for antibody to the human immunodeficiency virus (HIV), the virus that causes acquired immunodeficiency syndrome, has had a dramatic impact. Recent recommendations suggest that its impact will continue to increase. Initially it was rushed into use to preserve the safety of the blood supply. It has done that very well; the risk of getting AIDS from a blood transfusion now is only about 1:250,000 (1). Then, of course, many individuals in high-risk groups wanted to know if they had been exposed. Alternative testing sites were set up to keep these people from donating their blood in order to find out their antibody status.

Next came the Center for Disease Control's recommendation that people be tested if they received blood between 1978 and May, 1985, when the antibody test became available. That recommendation resulted in a significant increase (approximately fourfold in our facility) in anti-HIV tests performed on patients. Now we have the President of the United States recommending premarital testing plus screening of all prisoners, patients in Veterans Administration hospitals, and immigrants. The Surgeon General and the AMA have endorsed pre-operative screening of patients. We are in for another major increase in testing volume. All of this, and the test still is licensed only for testing blood donors.

As physicians, we must provide calm and compassionate support to patients who become involved in this testing. The decision of whether or not to order the test is, in many cases, slipping away from us. Nonetheless, we must be prepared to provide appropriate advice and compassionate counseling when given the opportunity.

The sensitive approach to such patients includes working through with them what will happen if the result is positive, as well as negative. This means being familiar with the most current recommendations for counseling anti-HIV-positive individuals (2). Physicians owe it to their patients to review the possible outcomes before ordering the test and, if they are not comfortable with handling a patient who has a positive result, to be prepared to refer the patient to a physician who is. A negative result is very reassuring, but is not 100% accurate. False negatives do occur, even if they do seem to be rare. Caution would certainly be wise in this situation for individuals in a high-risk group.

Potentially more damaging is a false-positive result. These occur fairly commonly with some of the kits now being used. The patient needs to know ahead of time that a definitive positive result may require a week or more to confirm, even though the screening immunoassay (EIA) result may be available the next day. It is important to remember that, even though the EIA procedure has extremely high specificity, most positive results will be false in low-risk patients, because of the low prevalence of true-positive, infected individuals. The best approach may be to tell the patient about an EIA-positive result only after the result of the confirmatory test (usually a Western blot) is available. If the situation does not permit waiting, enough time must be spent with the patient to insure that he or she understands the tentative nature of the EIA result. EIA-positive patients should be advised to behave as if they were infected with HIV until their Western blot result is known. If they are upset, they should be reassured and given time to calm down before being sent home or back to work. They should be told that they are under no obligation to tell anyone of their potential seropositivity unless that person is potentially at risk. It is best to keep uncertain results as confidential as possible.

It is very important to obtain the patient's fully informed consent before the test is ordered. Even if the test is ordered solely for the practitioner's protection, a positive or even a negative result can have personal, social, and legal repercussions far beyond its medical significance.

Very soon practically all physicians are going to have to be familiar with the details of anti-HIV testing. Patients will expect knowledgeable advice and sensitive counseling, and we cannot let them down if we are to contribute to the control of this epidemic. Perhaps this pressing need will help reverse the modern trend to think of doctors as unfeeling technicians who hide behind their machines. We are called upon once again to provide comfort, counsel, and reassurance in the face of a disease we cannot cure.

DANIEL J. LADD, MD
Member, TMA Committee on Blood Banking and Blood Transfusion, Scott and White Clinic, 2401 South 31st St, Temple, TX 76508.

EDITOR'S NOTE:
For more details on the legal aspects of drug testing, see Medicine and the Law, Tex Med 83(11):59–61, 1987.

REFERENCES

1. Bove JR: Transfusion-associated hepatitis and AIDS. N Engl J Med 317(4):242–244, 1987.
2. Information for Individuals About AIDS and the Antibody Blood Test. US Dept of Health and Human Services, Public Health Service, 1985. Letter from director, Office of Biologics Research and Review, FDA, Bethesda, MD, Feb 19, 1985.

"More on the Subjects"

This month we begin a new service to let readers know of additional materials available on selected subjects covered by our articles.

The Memorial Library staff has prepared "More on the Subjects" (p 43) for this month's articles on Hirschsprung's disease, all-terrain vehicles, and management of children with the "new morbidity" disorders. These recent materials are available from the TMA Memorial Library. To obtain these and other materials, and to find out more about the library's services, call (512) 477-6704. Most requests can be filled within 24 hours.

Pesticide poisoning may lurk behind more common diagnoses

Marcus M. Key, MD, MIH, wrote a letter published in the June 1987, issue of *Texas Medicine.*

Dr Key is an emeritus, eminent physician of occupational medicine, and his bringing to our attention the Texas Occupational Disease Reporting Act is essential to our learning and understanding of these cases.

In his letter, Dr Key specifies the four occupational conditions that are reportable in Texas as (1) blood lead levels greater than or equal to 40 µg/dL (1.93 µmol/L) in persons 15 years of age or older, (2) silicosis, (3) asbestosis, and (4) acute occupational pesticide poisoning.

The problems that arise with acute occupational pesticide reporting in my area are that most cases are reported under more frequently used diagnoses, and mention of the occupational pesticide exposure is omitted.

The researchers investigating the effects of pesticide poisonings have examined single chemicals in a controlled environment; however, the agricultural workers are in a totally different setting: They are subjected to very hot long hours in the field; their hours are extended beyond a 40-hour work week; and their exposures are a mixture of pesticides on the crops that they work with compounded by drift. Some researchers (1) are now writing about workers with multiple chemical sensitivities associated with multiple clinical pathologic findings.

For example: An agricultural worker may have been sprayed by a "duster" flying overhead. In the hot open field, it is often miles to the nearest source of running water with which he or she might wash off some of the toxin. It usually is not possible to change any pesticide-drenched clothes. If this person experiences health problems, there may be no aid other than perhaps another worker who is also a pedestrian in an adjoining field.

In my area, the most common emergency room diagnoses have been (1) acute respiratory distress or acute airway disease dysfunction; (2) chest pain; and (3) abdominal discomfort with nausea, vomiting, and dehydration.

At the emergency rooms, cholinesterase determinations may or may not be ordered, but if they are, the results will take many days. There is no specific test available. There are, however, blood lead levels available for proof of toxicity in a lead exposure case.

A worker may be picking bell peppers in a recently sprayed field, and may accidentally flick a drop of pesticide into his eye. He experiences burning pain and lacrimation. His group leader says there's nothing he can do but wait in the shade until the bus returns at the end of the work day to pick up all the workers. The lack of clean running water to rinse the eye out may lead to loss of sight and eventual enucleation. The hospital reports in such cases have listed the diagnosis as "severe eye infection and perforation of the sclera." No cholinesterase level would have been measured.

Other health care providers in our area are aware of similar problems with the current reporting of pesticide-related disease.

Another difficulty of documenting these health results by estimating retrospective exposure is the chronic low dose concerns where exposures may be more concentrated and potentially more persistent.

MARGARET R.W. DIAZ, MD, MPH
Occupational Medicine and Preventive Medicine, 864 Central Blvd, Suite 100, Brownsville, TX 78520.

REFERENCES

1. Cullen MR (ed): Occupational Medicine: State of the Art Reviews. Philadelphia, Hanley & Belfus, Inc, 1987, vol 2.

Ars longa, vita brevis

Some of us were fortunate enough to have practiced medicine during a period of semi-tranquility and freedom when a doctor was a doctor and malpractice insurance premiums were $40 a year. This period began at the end of World War II and ended abruptly in 1965 when the federal government moved in with both feet (left feet, that is) and shoved us out of the way to make room for the entrepreneur.

It was a time of patient-physician trust that had taken a couple of thousand years to develop. This relationship was based on a solid foundation of medical ethics, the Oath of Hippocrates, and the selfless dedication of our predecessors. If one didn't measure up, he didn't make the team. And if one violated the above tenets he was booted off the team and shunned by his peers.

Prior to 1965, members of our profession gave freely of their time and knowledge to the indigent and the near indigent. It was part of the territory, it was expected of us, and it had ever been thus. Most cooperated willingly, expecting nothing in return except the warm feeling of having done one's duty to society and the profession.

In the urban area, physicians and surgeons rotated through the various clinic services, and many served on one or more charity services year-round. Rural and surburban physicians rendered free care in their private offices to those who were unable to pay.

We were taught from the beginning that this was our bounden duty. An older surgeon once said to me, "Son, there are three kinds of poor—the Lord's poor, the devil's poor, and the 'poor devil.'" The Lord and the devil will take care of their own in their own way. It is up to us to care for the poor devil.

Well, from 1965 on, things changed rapidly. The government decided it would pick up the tab for not only the "poor devil" but also the Lord's poor and not-so-poor as well as the devil's bunch. Slowly but predictably, volunteerism vanished from the scene. Think for a moment what it now costs the

American taxpayer for services physicians rendered free a few short years ago.

Next comes the Federal Trade Commission, which in its wisdom decreed medicine is not a profession but a business. The solid foundation of ethics, oath, and selfless dedication began to crumble. Taboos such as abortion, advertising, soliciting, and so forth were not only openly practiced and condoned, but encouraged.

As the federal government got in deeper and prices went higher and higher, the bureaucrats began looking for a scapegoat. They decided, oddly enough, that the doctor is to blame because he admits patients to hospitals, orders tests, drugs, surgery, and so forth. So they came up with DRGs (among other things) to the detriment of patient care. Hail Caesar!

All the while big business was moving in gobbling up hospitals, clinics, and everything else in sight related to medical care. Compassion and concern were pushed to the back burner to make way for the bottom line. Hail General Bull Moose!

Well, neither I nor anyone else can accurately predict the future course of medicine, except that something has to give somewhere or they won't be able to print money fast enough to pay for it.

Sadly, whatever transpires, I am of the opinion that our profession has lost something in transition that cannot be replaced, and the patient has lost even more.

BEN M. NAIL, MD
4302 Wigton, Houston, TX 77096.

Change of address?
Please send the mailing label from your journal, together with your new address, to:
Membership Department
Texas Medical Association
1801 North Lamar Blvd.
Austin, TX 78701
(Yes, even if you're not a TMA member . . .)

You've chosen your profession.

We can secure it.

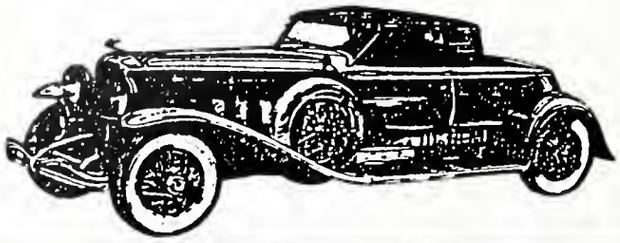
Specialization makes the difference.

API Life secures your profession with Life, Health and Disability Insurance especially designed for physicians, their practices and their families. Call us **TOLL-FREE, 1-800-252-3628** for a brochure or benefit comparison.

AMERICAN PHYSICIANS LIFE INSURANCE
Austin, Texas

If it Appreciates Buy it

If it Depreciates Lease it



J. Paul Getty

SPECIAL RATES FOR TMA MEMBERS

Honda Accord LX, 5 speed	$239.00	Porsche 924S	$399.00
Chevrolet Beretta GT	239.00	Porsche 911SC	636.00
Nissan Maxima SE, 5 speed	288.00	Corvette	449.00
Nissan 300 ZX, 5 speed	345.00	Mercedes Benz 190E	439.00
Mazda RX7 Coupe, 5 speed	267.00	Mercedes Benz 260E	569.00
BMW 325 Convertible	459.00	Mercedes Benz 420SEL	799.00
Olds 98/Buick Electra	339.00	Mercedes Benz SL Convertible	847.00
Cadillac Sedan Deville	379.00	Plymouth Voyager/Dodge Caravan SE	259.00

Plus tax, title and license. Prices subject to change due to manufacturers price increase and interest rate fluctuations.

Call Larry Albright at 1-800-654-1288 TOLL FREE

DELIVERED TO YOUR HOME OR OFFICE

TRADE INS - WE WILL PURCHASE YOUR PRESENT VEHICLE

NO DOWN PAYMENT

CLOSED END LEASE

APPLE LEASING

725 LAMAR BLVD. E. • ARLINGTON, TX 76011 • 461-3232 Metro

DIVISION OF DON DAVIS OLDSMOBILE/MORITZ CADILLAC

TMA IN ACTION

District judge halts collection of alleged overpayments

At press time, US District Judge James R. Nowlin had granted a preliminary injunction to halt the US Department of Health and Human Services' recoupment of alleged overpayments to a number of Texas physicians and Medicare beneficiaries for bills filed during July 1985 to April 1986. The Texas Medical Association, Texas Ophthalmological Association, Texas Academy of Family Physicians, Texas Society of Internal Medicine, Travis County Medical Society, 11 physicians, one medical clinic, and four patients brought the action against HHS. The injunction remains in effect until a full hearing on the merits of the case, which TMA legal counsel predicts will be in three to five months. Judge Nowlin's ruling on Thursday, Oct 29, followed an unsuccessful attempt two weeks earlier to secure a temporary restraining order, which would have halted the collection effort for 10 days.

The alleged overpayments occurred after HHS converted Medicare codes for physician services. To expedite the conversion, Blue Cross and Blue Shield of Texas, the state's Medicare carrier, paid for some procedures on the basis of a statewide fee schedule rather than historical customary and prevailing charge data. Contending that the use of the fee schedules was illegal, HHS began the recoupment effort in August. TMA and the other plaintiffs in the action assert that BC/BS exercised a legal option in basing payments on the fee schedule and in fact the payments were correct. (The plaintiffs' arguments are the subject of this month's Medicine and the Law column, which begins on page 51.)

Appearing in the US District Court for the Western District of Texas, Austin Division, HHS Assistant Regional Counsel Charlene M. Seifert told Judge Nowlin that 6,925 beneficiaries, 46% of those affected, and 2,817 (55%) of the physicians had paid in full, and HHS had waived more than 2,000 refunds. But TMA, represented by Doug Coulton of the Houston health law firm Wood, Lucksinger, and Epstein, pointed out, "It's no testimonial to the system to say that half the people have caved in already."

TMA's legal counsel told the court that HHS was inconsistent in its argument regarding the availability of fee profiles. The HHS brief, Mr Coulton said, argued that the profiles offered new information that justified reconsideration of the Medicare payments. At the same time, HHS said that BC/BS should not have used a statewide fee schedule because the profiles were available at the earlier date when BC/BS chose to use a fee schedule. The HHS Secretary is unruffled by the use of fee schedules for thousands of other procedures, he added.

TMA also dressed down HHS' argument that the case should not be in the courts because administrative remedies have not been exhausted. HHS hearings officers cannot contradict the HHS Secretary's opinion that the collection procedure was illegal, counsel said. Therefore, such hearings cannot address fairly TMA's contention that it was legal. Access to administrative hearings is "faint solace" to those facing the massive HHS bureaucracy, Mr Coulton added.

AMA delegates in Atlanta for interim meeting

Although the agenda for the Dec 6-9 interim meeting of the American Medical Association House of Delegates in Atlanta was not complete at press time, TMA Delegation Chairman Mylic E. Durham, MD, Houston, noted that the state association was set to consider several resolutions that requested referral to the AMA. The resolutions, which were to come before the TMA House of Delegates in November, concerned physician peer review, the legality of physicians paying for patient referrals, the Joint Commission on Accreditation of Healthcare Organizations' requirement that quality assurance outcome criteria be considered when reappointing medical staff, and increases in the Medicare Part B premium.

Dr Durham added, "The AMA House of Delegates also is vitally interested in AIDS and its ramifications. It's a topic that's going to be with us for a long time."

The Texas Medical Association will be represented by the nation's fourth largest delegation in Atlanta. Texas has 19 delegates, following California, 27 delegates; New York, 24; and Illinois, 20.

In addition to Dr Durham, the Texas delegation includes Merle Delmer, MD, San Antonio, vice chairman; George G. Alexander, MD, Houston; Val F. Borum, MD, Fort Worth; Dick K. Cason, MD, Hillsboro; Jack T. Chisolm, MD, Dallas; Milton V. Davis, MD, Kaufman; Ted H. Forsythe, MD, Lubbock; Hugh Lamensdorf, MD, Fort Worth; S. Braswell Locker, MD, Brookesmith; Haden E. McKay, MD, Humble; R. A. D. Morton, Jr, MD, El Paso; Sam A. Nixon, MD, Houston; James K. Peden, MD, Dallas; John R. Rainey, Jr, MD, Austin; Mario E. Ramirez, MD, Rio Grande City; L. Rodney Rodgers, MD, Houston; John M. Smith, Jr, MD, San Antonio; and Stanley E. Thompson, MD, Richmond.

The AMA House of Delegates was scheduled to begin at 10 am, Sunday, Dec 6, in the Marquis Ballroom of the Atlanta Marriott Marquis Hotel.

Houston authors win award for *Texas Medicine* article

The Editorial Committee for *Texas Medicine* has selected the scientific article "New techniques for the elimination of upper tract urinary stones" as the winner of the 1987 Harriet Cunningham Award of Excellence for Meritorious Scientific Writing. Named in honor of a long-time editor of *Texas Medicine*, the award brings the winning authors certificates and a $500 cash prize.

Randall B. Meacham, MD; James M. Libby, MD; and Donald P. Griffith, MD, wrote the article, which was published in the July 1987 issue of the journal. The authors are associated with the Scott Department of Urology, Baylor College of Medicine, The Methodist Hospital, and the Litho Center, Houston.

The article examines minimally invasive methods for the destruction of renal and upper ureteral stones: percutaneous nephroscopy, transurethral ureteroscopy, ultrasonic lithotripsy, electrohydraulic lithotripsy, and extracorporeal shock wave lithotripsy. The authors conclude, ". . . efficacy of stone elimination has in-

creased while the morbidity has decreased. Several new and different but complementary technologies have contributed to these advances. Patient selection and patient education are particularly important in proper utilization of these technologies."

In addition to "New techniques for the elimination of upper tract urinary stones," a second article was nominated for the award: "Motorcycle deaths and injuries in Texas: helmets make a difference," which appeared in the April 1987 edition of *Texas Medicine*. The authors were Linda E. Lloyd, MSW, MBA, Bureau of Epidemiology, Texas Department of Health; Mary Lauderdale, MA, Statistical Services, Texas Department of Public Safety; and Thomas G. Betz, MD, Bureau of Communicable Diseases, Texas Department of Health. Both articles had received the Harriet Cunningham Citation for Meritorious Scientific Writing and a $100 cash award.

John A. Mangos, MD, San Antonio, chairs the Editorial Committee for *Texas Medicine*. Other committee members are Marvin Forland, MD, Irving A. Ratner, MD, and Ciro V. Sumaya, MD, San Antonio; Peter C. Canizaro, MD, and Don E. Flinn, MD, Lubbock; Frank H. Gardner, MD, William J. deGroot, MD, L. Charles Powell, Jr, MD, Luther B. Travis, MD, and Paul R. Young, MD, Galveston; Glen E. Journeay, MD, Austin; Kenneth L. Mattox, MD, and David A. Swanson, MD, Houston; and Norman M. Kaplan, MD, and Alice L. Smith, MD, Dallas.

Guide links Texas blood banks willing to respond to disasters

Texas Medical Association's Committee on Blood Banking and Blood Transfusion has updated the "TMA Disaster Response Plan," a guide that links blood banks willing to respond in disaster situations in which there is urgent need for blood and blood components. The guide was prepared "to give disaster victims a head start in obtaining needed blood and blood components," says Committee Chairman Margie B. Peschel, MD, Fort Worth.

Twenty Texas blood banks from El Paso to Beaumont and Texarkana to McAllen are listed in the guide, which includes information on inventories and how primary staff members can be contacted in an emergency. The guide has been distributed to the participating blood banks and TMA's Committee on Emergency Services and Trauma.

The Committee on Blood Banking and Blood Transfusion first issued the TMA Disaster Response Plan in 1983.

In addition to Dr Peschel, the committee members include: James W. Langley, MD, Dallas; Robert Kerr, MD, Austin; Clarence P. Alfrey, Jr, MD, Houston; Cathy J. Spadaccini, MD, San Antonio; D. Nello Brown, MD, Wichita Falls; Daniel J. Ladd, MD, Temple; Gary E. Gross, MD, Tyler; Robert Lewy, MD, Houston; Patrick R. Johnson, College Station, student representative; Jeffrey Wang, College Station, alternate student representative; Rhonda L. Shannon, MD, Pearland, resident representative; Mrs David H. Glenn, Texas City, auxiliary representative; Alain J. Marengo-Rowe, MD, Dallas, consultant; John N. Kemp, Austin, consultant; and Bill Teague, Houston, consultant.

CME opportunities expand with accreditation program

Texas Medical Association's Committee on Continuing Education accredited the Centers of Excellence, Humana Hospital, Inc, San Antonio, and reaccredited eight other institutions and organizations during 1987, bringing to 24 the total number of institutions and organizations accredited by TMA. Through the accreditation process, TMA and the Accreditation Council for Continuing Medical Education (ACCME) verify that continuing medical education activities meet recognized standards of quality.

The institutions reaccredited during 1987 include: South Arlington Medical Center, Arlington; Baylor University Medical Center, Houston; Texas Society of Psychiatric Physicians; Sierra Medical Center, El Paso; Hendrick Medical Center, Abilene; Presbyterian Hospital of Dallas; Texas Pediatric Society; and AMI Park Plaza Hospital, Houston.

TMA's accreditation program has been in operation since 1974. Further information on the program is available from Linda Timmons, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701, phone (512) 477–6704, extension 253.

Award honors media coverage of health topics

Entries in the annual Anson Jones Award competition must be at Texas Medical Association headquarters by Jan 15, 1988. Sponsored by the association's Council on Communication, the award honors outstanding coverage of health topics by the state's news media.

Now in its 31st year, the competition features 10 categories, including six for print media and four for broadcast media. The print categories are: daily newspapers with daily circulation of 100,000 or more, circulation between 24,000 and 99,999, and circulation below 24,000; weekly, biweekly, and semiweekly newspapers; association, trade, or chamber publications; and consumer and general interest publications.

The broadcast categories are: radio stations in Austin, Dallas, Fort Worth, Houston, and San Antonio; radio stations in all other cities; television stations in Austin, Dallas, Fort Worth, Houston, and San Antonio; and all other television stations.

The winner of each category receives $500 and a certificate for excellence in communicating health information to the public. Citations of merit also may be given. Entries must have been published between Jan 1, 1987, and Dec 31, 1987. Respected members of the newspaper and publishing industries and a panel of physicians will select winners by April 1, 1988. Entries are judged on accuracy, significance, quality, public interest, and impact, with the Council on Communication making final decisions on the winners.

The award is named for a pioneer Texas physician and author who served the Republic of Texas as a member of its congress, secretary of state, and its last president.

Further information is available from the TMA Communication Department, 1801 N Lamar Blvd, Austin, TX 78701, phone (512) 477-6704.

The members of the Council on Communication are: Johnnie J. Jerome, MD, Garland, chairman; Joel Earl Reed, MD,

Be enlightened . . .
Use Your Own Scorecard for DISABILITY INSURANCE

COMPARISON AND EVALUATION GUIDE FOR DISABILITY INSURANCE

This guide was prepared to provide a reasonable basis for completeness and fairness in the event a comparison is made of the Texas Medical Association Disability Income Insurance with other disability income insurance.

Texas Medical Association Disability Insurance	Name of Other Disability Insurance: _____
TOTAL DISABILITY **Maximum Monthly Benefits:** • Thru age 64—$8,000 • Ages 65–69—$2,000 • Ages 70–74—$400	You may be insured up to the maximums, regardless of other disability coverages you may have. Amount is not restricted to a percentage of income. The full TMA benefit is payable at the time of claim regardless of monies you receive from other disability coverages. Social Security, Worker's Comp., salary continuations, interest, pensions, etc.
Termination Date • Coverage may remain in force to age 75, subject to active practice requirements	At age 65, coverage does not terminate, you do not have to reapply, or pay a higher cost
Benefit Period for Total Disability, Sickness or Accident: • For disabilities commencing prior to age 60, benefits are payable to age 65. • For disabilities commencing at age 60 or older, refer to chart . . . . . →	What the benefit period means to you Age at onset of disability 60 61 62 63 64 65 66 67 68 69 70–74 5 5 5 5 5 5 5 5 4 3 1 Maximum number of years benefits are payable **Some disability insurance terminates at age 65.** If so, the number of years benefits are payable will begin to decrease at age 61 and become zero at age 65
Waiting Periods for Sickness and Accident (Total or Partial Disability) • 30–90–180 consecutive days	You may distribute your total monthly benefit among several waiting periods.
Definition of Total Disability • You must be under the care of a physician other than yourself, as required for your condition, • be unable to perform the duties of your occupation at your medical specialty. "Specialty" means the occupation performed at the time of disability • Total disability is not considered to e… gainfully employed. **It is not unus… provision in a Disability**	The definition does not stipulate a schedule of visits, or treatment, and does not require care of a physician if the impairment re… attention. If you cease all… perform the d…
Survi…	

Benefit Period for Total Disability, Sickness or Accident:

For coverage which terminates at age 65
- For disabilities commencing prior to age ____ benefits are payable to age ____
- For disabilities commencing at an age older than indicated above

Age at onset							
Years payable							

For coverage which does not terminate at age 65
- For disabilities commencing prior to age ____ benefits are payable to age ____
- For disabilities commencing at an age older than indicated above

Age at onset										
Years payable										

For coverage conditionally renewable at age 65

Age at onset	65	66	67	68	69	70	71	72	73	74
Years payable										

We urge you to take action to find out how the
TEXAS MEDICAL ASSOCIATION'S
Disability Insurance compares benefit for benefit and dollar for dollar with other disability insurance

Your scorecard may be found on page 10 of the Texas Medical Association Insurance Brochure, dated November, 1987. (It's blue this time.)

If you do not have a brochure, or have need of more copies of the Guide, call: 1-800-252-9318

Texas Medical Association
INSURANCE PROGRAM
1901 North Lamar Blvd, Austin, TX 78705
underwritten by
PRUCO Life Insurance Company of Texas
a subsidiary of the Prudential

Houston; Joseph A. O'Neill, MD, and Michael A. Ozer, MD, San Antonio; Julian Kitay, MD, Galveston; Clark C. Hampe, MD, Tyler; Mary D. Bublis, MD, Plainview; Dixie Melillo, MD, Pasadena; Thomas S. McHorse, MD, Austin; Vincent Sherman, Galveston, student representative; Cristin Dickerson, Houston, alternate student representative; and Mrs C. Bruce Malone, Austin, auxiliary representative.

San Antonio's charm beckons as annual session approaches

San Antonio, which began as a Spanish mission in 1718 and has grown into the nation's ninth largest city, is the site of Texas Medical Association's 121st Annual Session, Thursday through Sunday, May 12-15, 1988. The newly remodeled and expanded Henry B. Gonzalez Convention Center, headquarters for scientific programs and technical and scientific exhibits, is in the heart of the city, on the banks of the San Antonio River. The convention center is within walking distance of session headquarters hotels—the Hilton Palacio del Rio, San Antonio Marriott Riverwalk, and Hyatt Regency—and also can be reached by water taxi.

The San Antonio River, which quietly winds through the city, is lined on either side with sidewalk cafes, hotels, restaurants, night clubs, and shops, as well as adobe houses built more than 200 years ago. Between meetings, TMA members and guests will enjoy riding open-air barges or self-powered paddle boats.

In addition to the pleasures of the Riverwalk, the city has five 18th-century Spanish missions, including the Alamo, which is located in a small state park near the convention center. Close to the Alamo is the colorful Mexican market, with small shops and galleries. Nearby is La Villita, a recreated Mexican village housing more than two dozen arts and crafts shops and restaurants.

Also close to the downtown area is the King William Historic District, a 25-block area of stately homes built by prominent German settlers. Many of these have been restored to their original state by new owners. The Steves Homestead is open to the public.

Plan to come enjoy San Antonio and the opportunities to update professional skills and relax with your peers at the 121st Annual Session of the Texas Medical Association.

HEALTH LINE

Datafiles now on-line from Texas Cancer Data Center

Physicians and other health professionals now can access several datafiles on-line from the Texas Cancer Data Center (TCDC) through TEXNET and TELENET. TCDC was created by the Texas Cancer Council in response to recommendations in the Texas Cancer Plan for a central repository of information on cancer resources in Texas.

The datafiles contain information on physicians involved in oncology, hospitals, hospices, and physicians interested in speaking on oncology-related subjects. Other datafiles are being created.

For information about access to the datafiles, contact TCDC at HMB 223, 1515 Holcombe Blvd, Houston, TX 77030, or call (713) 792–2277.

American Heart Association issues Blueprint for Health

The American Heart Association (AHA) has made specific recommendations to physicians about checkups for apparently healthy adults. While recognizing the debate in the medical profession about periodic medical checkups, the AHA takes the position that prevention is the greatest need in cardiovascular medicine, and adds that regular checkups provide the opportunity for early detection of disease, for identifying risk factors, for initiating preventive measures and for educating the patient about health matters.

The AHA makes these specific recommendations to physicians about checkups for apparently healthy adults:

—Schedule routine examinations every five years from ages 20 to 60; every two and a half years from 60 to 75; then yearly.

—Give a physical examination and take a medical history at the first checkup; update it at each following visit.

—Collect information on weight, cholesterol, triglycerides and blood sugar at the first checkup as a baseline; update this information every five years. Perform other laboratory tests only if needed in the physician's judgment.

—Measure blood pressure more often: every two and a half years.

—Do a baseline electrocardiogram at age 20; repeat at ages 40 and 60.

—Take a baseline chest X-ray at age 40.

—After age 60, tests of blood lipids (cholesterol and triglycerides) are optional, depending on earlier findings; blood sugar tests are optional after age 75.

—Additional tests should be scheduled for heavy smokers, including lung function tests every five years, annual chest x-rays and more frequent electrocardiograms.

Syphilis test required for pregnant women and newborns

The TMA legal staff reminds physicians that public health law requires physicians attending a pregnant woman during gestation or at the delivery of the infant, to take a sample of the woman's blood at the time of first examination and submit the sample to an approved laboratory for a standard serologic test for syphilis. A report for each case must be kept for nine months and delivered to any successor in the case.

Additionally, within 24 hours of delivery, the physician or other person in attendance must take a sample of the blood from the mother of the infant and submit it for a syphilis test. A sample of blood from the umbilical cord of the infant may be submitted in lieu of the maternal blood.

Every physician or other person required to report births or fetal deaths must state on each birth or fetal death certificate whether a blood test for syphilis was performed during the pregnancy and on the maternal blood or the umbilical cord blood of the newborn infant.

SOCIOECONOMICS

HCFA to release data on hospital mortality to public

Following an apologetic *Federal Register* announcement that acknowledges several flaws in the statistical model, the Health Care Financing Administration (HCFA) expects to release to the public statistics on hospitals' overall postadmission mortality rates in December. The information will be available for purchase from the government printing office, and also will be distributed to state hospital and medical associations, the American Association of Retired Persons, members of Congress, and selected media.

"We believe that information about hospitals' overall post-admission mortality rates and specific mortality rates for certain medical conditions will be a valuable tool for Peer Review Organizations (PROs) for focusing on potential quality of care problems, for hospitals in focusing their efforts on improving the quality of care they provide, and for consumers in making decisions on obtaining health care," the HCFA stated in the *Federal Register*.

The mortality statistics are derived from Medicare bills submitted for services furnished in 1986. According to the announcement, which appeared Aug 17, 1987, the information released to the public in December 1987 will present, for each short-term, acute care hospital that treated Medicare beneficiaries in 1986, the number of beneficiaries it treated, the percentage of beneficiaries who died within 30 days of admission, and the expected percentage of deaths, calculated on the basis of the overall national experience with patients of similar age, sex, incidence of complicating diseases, and prior hospitalizations in 1986. The final document will include comments provided by the hospitals.

HCFA acknowledged, " . . . not all of the factors affecting the probability of death in a particular case, most notably severity of illness, are included in the predictive model . . . ." Additionally, the *Federal Register* notes that the smaller the number of admissions, the less reliable are the statistics, as the impact of random variation of outcomes in individual cases is greater. However, HCFA maintains that this year's model is an improvement over last year's, which resulted in "considerable confusion and misinterpretation."

HCFA has announced its plans for annual publication of selected statistics about the performance of hospitals, adding, "We intend to develop other measures of quality, to assist PROs in working with hospitals to improve hospital performance, and to work with major health care and consumer organizations to improve the educational value of the information for both consumers and providers."

HCFA to monitor compliance with elective surgery rules

Three months after their effective date, beginning Jan 1, 1988, the Health Care Financing Administration (HCFA) will monitor physicians' compliance with regulations regarding elective surgery. The regulations, which are contained in the Omnibus Budget Reconciliation Act of 1986 (OBRA), require that physicians provide patients written notification when the physician's fee for elective surgery procedures is $500 or more and assignment will not be accepted. The requirement also applies to unassigned claims for the services of assistants at surgery whose fees are $500 or more.

According to communications from the American Medical Association, the physician must provide Medicare patients with a written notice listing the type of surgery, the physician's estimated charge, Medicare's estimated payment, and the patient's out-of-pocket expense. The patient should sign the notice, and it should be retained in the physician's records.

Medicare carriers are to provide physicians with a worksheet to calculate estimated charges and a sample beneficiary letter, the AMA reports. However, carriers are not expected to send updated charge information to individual physicians. Physicians are expected to use 1987 Medicare payment information previously sent for compliance with MAAC limits or payments on 1987 assigned claims for compliance. Questions about Medicare allowed charges for a particular surgical procedure should be directed to Blue Cross/Blue Shield of Texas, the Texas Medicare carrier.

The AMA adds, physicians who fail to provide advance notice of charges will be required to issue refunds to patients for the amount the fee exceeded the Medicare allowed charge. Physicians who do not make refunds will be subject to civil monetary penalties and/or exclusion from the Medicare program.

TMF changes requirement for cataract surgery

Texas Medical Foundation has announced a change in preprocedural requirements for assistants at cataract surgery for ophthalmologists. The foundation notes, "Preprocedural approval by TMF is no longer required for assistants at cataract surgery when performing insertion of an intraocular lens as a separate procedure (HCPCS code #66985)."

CAPITAL COMMENTS

Interim legislative studies focus on health care issues

Texas Medical Association is monitoring a number of proposed interim legislative studies that deal with health care issues, including health care insurance coverage for the working poor, long-term health care, and rural health care. Appointments to the study panels were pending at press time. They will report to the 71st Texas Legislature, which convenes in January 1989.

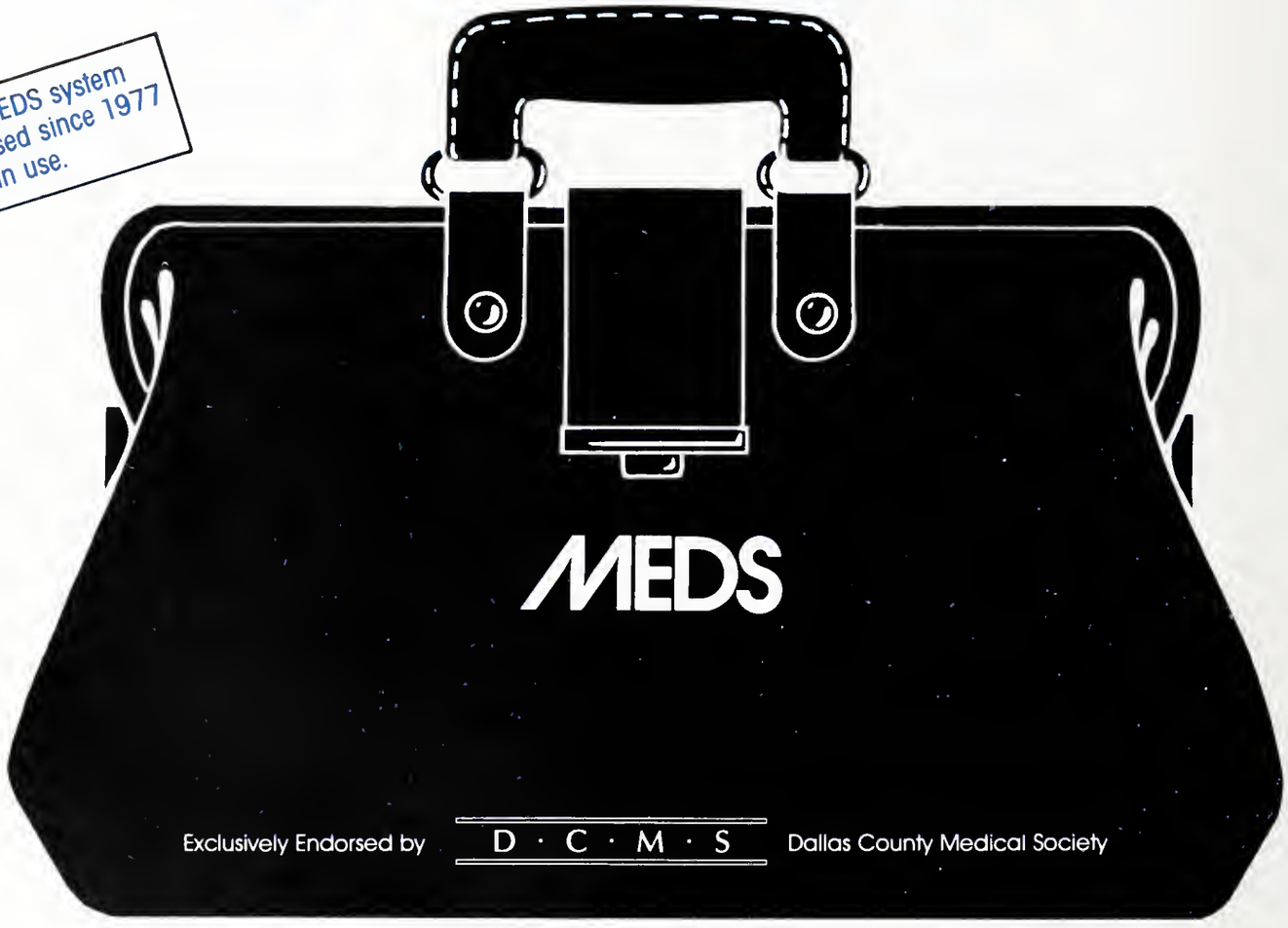
One study group, the Texas Commission on Health Care Reimbursement Alternatives, will design a basic health plan for uninsured and underinsured individuals who cannot afford or acquire adequate health insurance. The commission was approved in House Concurrent Resolution 98, sponsored by Rep Alan Schoolcraft (R-San Antonio).

A resolution sponsored by Rep Ashley Smith (R-Houston) established the Special Task Force on the Future of Long-

Physicians Computerized Office Management System

WE MAKE HOUSE CALLS

Every MEDS system purchased since 1977 is still in use.



Exclusively Endorsed by D · C · M · S Dallas County Medical Society

MEDS will individually tailor an Office Management system to fit your practice needs. Texas based, MEDS has been satisfying the data processing needs of physicians across the Southwest for over eight years. MEDS systems help simplify and streamline the increasingly complex problem of managing your practice. Contact us so that we can show you all the ways your practice can benefit from a system of your own.

MEDS PROVIDES

- Electronic claims submissions
- State of the art hardware
- Ongoing service, support and training
- Patient scheduling and recall
- Insurance filing and tracking

MEDS

Medical Data Systems, Inc.
Carporate Office Dallas
Ten Thausand Narth Central Suite 1000
Dallas, Texas 75231

In Texas call toll free 1-800-272-MEDS
Natianwide call toll free 1-800-922-MEDS
Dallas/Fart Warth Metra call 263-9812

San Antonia Office
15600 San Pedra Suite 301
San Antonio, Texas 78232
(512) 490-0322

term Health Care. The task force will study the current and future status of long-term health care in Texas and analyze laws and regulations that affect long-term health care, with the goal of providing quality care for residents in the most efficient manner.

Rural health care will come under the scrutiny of a task force that was created by a resolution presented by Sen Chet Brooks (D-Pasadena). The group will study the delivery of health care in rural areas and provide a plan for a cooperative endeavor between county governments and the Texas Department of Health.

Other issues under study are the state's health and human services programs, prevention of mental and developmental disabilities, teenage suicide, workers compensation insurance, medical and allied health education, and regulation of radioactive waste.

AMA explains 19.9% rise in Part B costs for 1986

The American Medical Association told the House Ways and Means Committee that there are least five plausible reasons for the 19.9% rise in Medicare Part B expenditures that occurred during 1986. The increase is blamed for a projected 38.5% increase in Medicare Part B premiums for 1988, which will push the monthly cost from $17.90 to $24.80.

James S. Todd, MD, the AMA's senior deputy executive vice president, represented the association at the Sept 30 fact-finding hearing. Dr Todd told committee members that the use of Part B services has increased because (1) the Medicare population has increased in numbers and age; (2) the government has maintained the deductible at the level set in 1981; (3) there is wider acceptance of assignment; (4) Part B charges have been held down by widespread physician participation in a voluntary fee freeze, Congressionally-imposed reimbursement and fee freezes, and by the Maximum Allowable Actual Charges (MAACs); and (5) there has been a decline in costs of office visits in terms of relative pricing. The association estimated that almost half of the premium increase is needed to "catch-up" for past underfunding because HCFA set the 1986 and 1987 premiums below the level of 25% of program cost as authorized by law.

In answer to accusations that physicians are gouging the system, Dr Todd assured committee members that the AMA had seen no evidence of such behavior. "If there were," he said, "the AMA would be at the forefront of efforts to address such a problem." Congressman Fortney (Pete) Stark (D-Calif), chairman of the Health Subcommittee of the Ways and Means Committee earlier had charged that, "The current fee-for-service payment system gives doctors a key to the Treasury. Controls against unnecessary services are having little effect. The only solution to the problem is tight new limits on fees." John Rother, legislative director of the American Association of Retired Persons, called the rise in Part B costs "unprecedented" and asserted, " . . . it seems to reflect an out-of-control program where the taxpayers and the Medicare program are writing checks" for the medical profession.

In addition to Dr Todd's appearance, the AMA addressed the questions surrounding the Part B cost increase through communications with Health Care Financing Administrator William L. Roper, MD, and Health and Human Services Secretary Otis Bowen. AMA Executive Vice President James H. Sammons, MD, has assured them, "The AMA is totally committed to appropriate, quality care that is affordable."

NEWSMAKERS

Three Texas doctors received special recognition from their peers during convocation ceremonies at the annual meeting of the American College of Radiology. Named as fellows by the college's Board of Chancellors were DALE BRANNOM, MD, Abilene, HUGO F. ELMENDORF, JR, MD, San Antonio, and RAY L. ZEIGLER, MD, Waco. Fellowships to the college are awarded for significant scientific or clinical research in the field of radiology, or significant contributions to its literature.

STEPHEN S. CLARK, MD, Austin, was elected president of the American Cancer Society, Texas Division, and EDWIN D. SAVLOV, MD, Amarillo, was chosen president-elect. Physicians who were elected regional vice presidents are ARNOLD WALDER, MD, PhD, San Antonio, and R.B. CARAWAY, JR, MD, Wharton. DONALD C. SPENCER, MD, Austin, received the ACS National Division Award, which is the highest recognition given to division volunteers. GEORGE PETERS, MD, Dallas, also was honored at the ACS meeting for chairing the Texas Breast Screening Project.

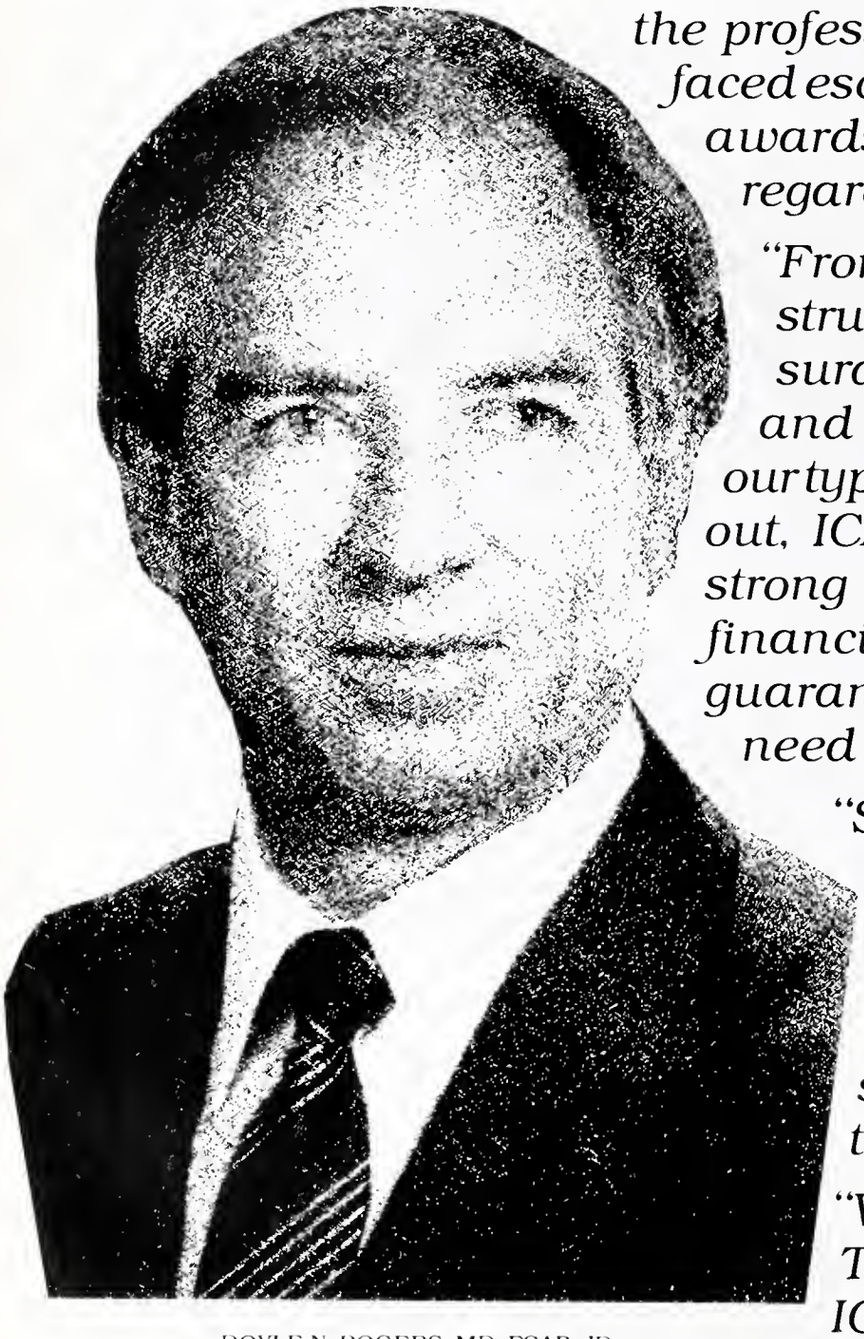
O.C. COOPER, MD, College Station, recently was honored as the Texas Academy Family Physician of the Year. The honor is bestowed by the Texas Academy of Family Physicians on doctors who have demonstrated a special dedication to their patients, profession, and the specialty of family practice.

EMIL J. FREIREICH, MD, and EDMUND A. GEHAN, MD, received the Biomedicine and Pharmacotherapy Prize presented at the annual meeting of the International Society of Medical Ethics, Philosophy, Methodology and Economy. Dr Freireich is director of the Adult Leukemia Research Program at M.D. Anderson Hospital and Tumor Institute and Dr Gehan is chief of the Section of Biometrics. They have worked together for more than 25 years on designing clinical trials for new cancer therapies that are scientifically accurate but also allow the most patients to benefit from new treatments.

M.E. MALAKOFF, MD, Laredo, was named Physician of the Year by the Texas Governor's Committee for Disabled Persons. Dr Malakoff received the award for his work relating to the employability of persons with disabilities.

JOHN C. RIBBLE, MD, dean of The University of Texas Medical School, has been named interim president of the UT Health Science Center at Houston. He will retain his position as dean of the medical school. Dr Ribble joined the medical school in 1978 and was associate dean for academic affairs from 1983 until his appointment as dean in 1986.

"We Understand Your Frustration."



DOYLE N. ROGERS, MD, FCAP, JD
Chairman, President, CEO

"You don't need to be told how tough the last few years have been in the professional liability arena. You've faced escalating premiums, escalating awards and escalating frustrations, regardless who insures you.

"From our side of the table, we've struggled with diminishing reinsurance, exhorbitant claims costs and an industry-wide change in our type of insurance policy. Throughout, ICA has strived to maintain a strong balance sheet, because our financial stability is your only real guarantee that we'll be here if you need us.

"So, we made tough and sometimes, unpopular, decisions. But the bottom line is this: We've positioned ourselves as a strong force in the professional liability business, for today and tomorrow.

"We'll be here if you need us. That's what we both want. At ICA, we're committed to protecting your practice."

ICA
INSURANCE
CORPORATION
OF AMERICA

Houston, Texas (713) 871-8100
The Professional Liability Specialist

fore prescribing, see complete prescribing information in SK&F CO. erature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

ntraindications: Concomitant use with other potassium-sparing agents ch as spironolactone or amiloride. Further use in anuria, progressive al or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum assium. Hypersensitivity to either component or other sulfonamide-ived drugs.

arnings: Do not use potassium supplements, dietary or otherwise, less hypokalemia develops or dietary intake of potassium is markedly paired. If supplementary potassium is needed, potassium tablets ould not be used. Hyperkalemia can occur, and has been associated th cardiac irregularities. It is more likely in the severely ill, with urine lume less than one liter/day, the elderly and diabetics with suspected confirmed renal insufficiency. Periodically, serum K^+ levels should be termined. If hyperkalemia develops, substitute a thiazide alone, restrict intake. **Associated widened QRS complex or arrhythmia requires mpt additional therapy.** Thiazides cross the placental barrier and pear in cord blood. Use in pregnancy requires weighing anticipated nefits against possible hazards, including fetal or neonatal jaundice, ombocytopenia, other adverse reactions seen in adults. Thiazides pear and triamterene may appear in breast milk. If their use is essential, e patient should stop nursing. Adequate information on use in children not available. Sensitivity reactions may occur in patients with or with-t a history of allergy or bronchial asthma. Possible exacerbation or tivation of systemic lupus erythematosus has been reported with azide diuretics.

ecautions: The bioavailability of the hydrochlorothiazide component of yazide' is about 50% of the bioavailability of the single entity. eoretically, a patient transferred from the single entities of triamterene d hydrochlorothiazide may show an increase in blood pressure or fluid tention. Similarly, it is also possible that the lesser hydrochlorothiazide oavailability could lead to increased serum potassium levels. However, tensive clinical experience with 'Dyazide' suggests that these conditions ve not been commonly observed in clinical practice. Angiotensin-nverting enzyme (ACE) inhibitors can elevate serum potassium; use th caution with 'Dyazide'. Do periodic serum electrolyte determinations articularly important in patients vomiting excessively or receiving renteral fluids, and during concurrent use with amphotericin B or rticosteroids or corticotropin [ACTH]). Periodic BUN and serum eatinine determinations should be made, especially in the elderly, abetics or those with suspected or confirmed renal insufficiency. mulative effects of the drug may develop in patients with impaired renal nction. Thiazides should be used with caution in patients with impaired patic function. They can precipitate coma in patients with severe liver sease. Observe regularly for possible blood dyscrasias, liver damage, her idiosyncratic reactions. Blood dyscrasias have been reported in tients receiving triamterene, and leukopenia, thrombocytopenia, ranulocytosis, and aplastic and hemolytic anemia have been reported th thiazides. Thiazides may cause manifestation of latent diabetes ellitus. The effects of oral anticoagulants may be decreased when ed concurrently with hydrochlorothiazide; dosage adjustments may be cessary. Clinically insignificant reductions in arterial responsiveness norepinephrine have been reported. Thiazides have also been shown to crease the paralyzing effect of nondepolarizing muscle relaxants such tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic ood studies in cirrhotics with splenomegaly. Antihypertensive effects ay be enhanced in post-sympathectomy patients. Use cautiously in rgical patients. Triamterene has been found in renal stones in associa-on with the other usual calculus components. Therefore, 'Dyazide' ould be used with caution in patients with histories of stone formation. few occurrences of acute renal failure have been reported in patients 'Dyazide' when treated with indomethacin. Therefore, caution is lvised in administering nonsteroidal anti-inflammatory agents with yazide'. The following may occur: transient elevated BUN or creatinine both, hyperglycemia and glycosuria (diabetic insulin requirements may altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), creasing alkali reserve with possible metabolic acidosis. 'Dyazide' terferes with fluorescent measurement of quinidine. Hypokalemia is common with 'Dyazide', but should it develop, corrective measures ould be taken such as potassium supplementation or increased dietary take of potassium-rich foods. Corrective measures should be instituted utiously and serum potassium levels determined. Discontinue correc-ve measures and 'Dyazide' should laboratory values reveal elevated rum potassium. Chloride deficit may occur as well as dilutional ponatremia. Concurrent use with chlorpropamide may increase the risk severe hyponatremia. Serum PBI levels may decrease without signs thyroid disturbance. Calcium excretion is decreased by thiazides. yazide' should be withdrawn before conducting tests for parathyroid nction. Thiazides may add to or potentiate the action of other anti-pertensive drugs. Diuretics reduce renal clearance of lithium and crease the risk of lithium toxicity.

dverse Reactions: Muscle cramps, weakness, dizziness, headache, y mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other ermatological conditions; nausea and vomiting, diarrhea, constipation, ther gastrointestinal disturbances; postural hypotension (may be ggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, aresthesias, icterus, pancreatitis, xanthopsia and respiratory distress ncluding pneumonitis and pulmonary edema, transient blurred vision, ialadenitis, and vertigo have occurred with thiazides alone. Triamterene as been found in renal stones in association with other usual calculus omponents. Rare incidents of acute interstitial nephritis have been eported. Impotence has been reported in a few patients on 'Dyazide', lthough a causal relationship has not been established.

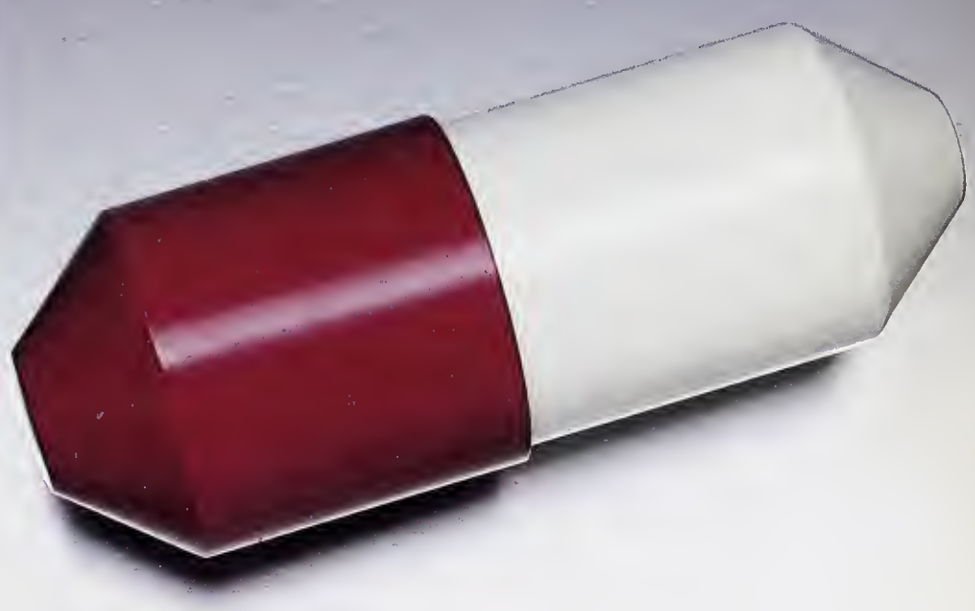
upplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 000 capsules; Single Unit Packages (unit-dose) of 100 (intended for nstitutional use only); in Patient-Pak™ unit-of-use bottles of 100.

RS-DZ.L42

In Hypertension*... When You Need to Conserve K^+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions)



Potassium-Sparing DYAZIDE®

25 mg Hydrochlorothiazide/**50 mg** Triamterene/SKF

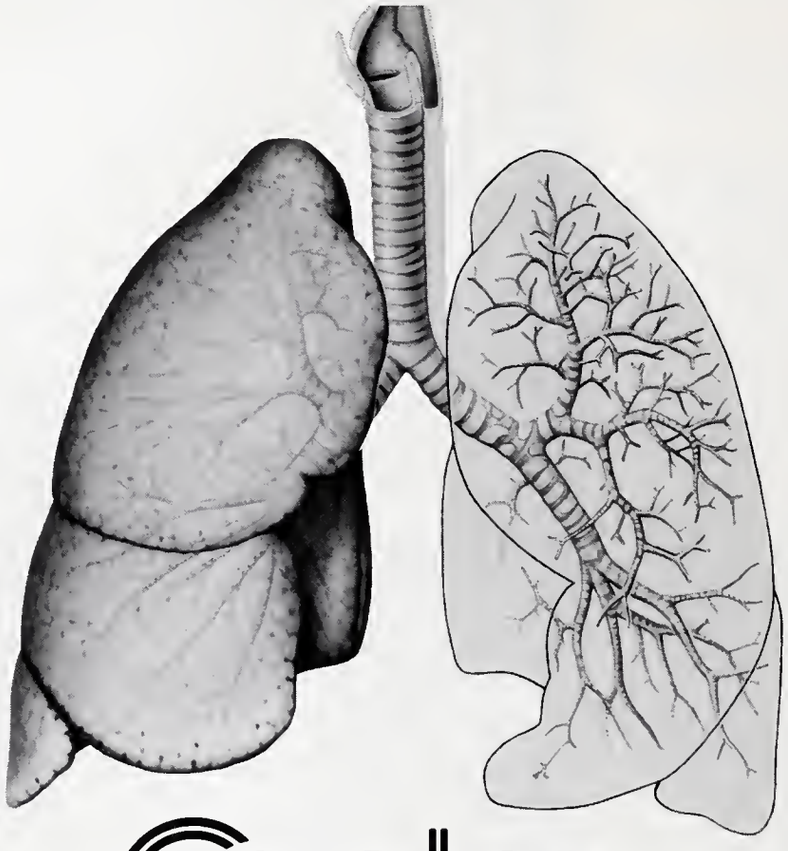
Over 20 Years of Confidence

The unique red and white Dyazide® capsule: Your assurance of SK&F quality.

a product of
SK&F CO.
Carolina, P.R. 00630

©SK&F Co., 1983

Consider the causative organisms...



Ceclor®
cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae and *Streptococcus pneumoniae*
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULO BE AOMINISTEREO CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS PENICILLINS ANO CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUOE ANAPHYLAXIS

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061787L]

PA 0709 AMP

©1987, ELI LILLY AND COMPANY CR-5005-8-849318

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

ZOVIRAX®
(acyclovir)
CAPSULES

Prevent genital herpes recurrences month after month with daily therapy.

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

Please see last page of this advertisement for

ZOVIRAX®
(acyclovir)
CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page

Prevent recurrences month after month*

ZOVIRAX®
(acyclovir)
CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73/m^2.

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709

Copr © 1986 Burroughs Wellcome Co. All rights reserved 86-ZOV-5

NATHALIE A. VANDERPOOL, MEd
BILLY U. PHILIPS, PhD, MPH
WARREN F. DODGE, MD

Management of children with 'new morbidity' disorders

Nathalie A. Vanderpool, MEd, Assistant Professor, and Warren F. Dodge, MD, Professor, Department of Pediatrics; Billy U. Philips, PhD, MPH, Associate Professor, Department of Preventive Medicine and Community Health, The University of Texas Medical Branch, Galveston, TX 77550. Send reprint requests to Dr Dodge.

This study determined the current management styles of pediatricians in Texas for five "new morbidity" disorders: temper tantrums, separation anxiety, school phobia, chronic abdominal pain, and nocturnal enuresis. Respondents separated into three groups. Group 1, who were the youngest physicians, had been in practice the shortest period of time, saw the fewest patients per day, and did not use medications for any of the disorders. Group 3, who were the oldest, had been in practice the longest, saw the most patients per day, and used medications for all five disorders. Group 2, the majority, used medications for chronic abdominal pain (sometimes) and nocturnal enuresis (often) but not for temper tantrums, separation anxiety, or school phobia.

In the past, management of contagious and infectious diseases constituted a major portion of the health care provided to infants and children. A dramatic change in the health problems of children has accompanied the widespread use of immunizing vaccines and antimicrobial agents. An increasing portion of health care is now directed toward developmental, behavioral, social, and educational problems of childhood—commonly known as the "new morbidity" (1–4). The recognition and management of these problems place new demands upon child health providers who have been trained to deal with more traditional morbidity presented by the physical problems of children. The purpose of this study was to determine the current management of new morbidity disorders by pediatricians in Texas. More specifically it was designed to ascertain the use of medications by pediatricians in their management of certain developmental and behavioral conditions in children. Five new morbidity disorders commonly managed by pediatric generalists were chosen for study: temper tantrums, separation anxiety, school phobia, chronic abdominal pain, and nocturnal enuresis. Subject recruitment and data collection methodology were approved by the Institutional Review Board of the University of Texas Medical Branch.

Materials and methods

One-hundred-fifty physicians (a 10% random sample) were selected from a mailing list for 1,500 pediatricians practicing in Texas in 1985. The mailing list was alphabetical within postal zip code. Ninety-four (63%) of the 150 responded. Four were eliminated from the final analysis because of incompleteness of response.

The data-gathering instrument for this study was a mailed questionnaire which took less than 20 minutes to complete. To enhance reliability, definitions of the disorders and management techniques (Fig 1) were provided the respondents. The questionnaire asked for: demographic information about the respondents (age, sex, ethnicity, place of residency and year it was completed, board eligibility or certification, subspecialty or area of interest). It also requested an estimate of the number of patients they had seen with each of the five disorders in the past year and how they managed each disorder (ie, counseling, behavior modification, consultation, referral, medication, or other). If the respondent indicated consultation or referral, he or she was asked what factors led to this management choice and the type of professional selected. If the respondent indicated drug therapy for a disorder, he or she was asked to indicate the type of medication (ie, sedative, benzodiazepines, tricyclics, anticonvulsants, spasmolytics, others) and frequency of use of this therapy, (ie, never, sometimes, often.) Examples were provided for each type of drug, (eg, tricyclics—Elavil, Tofranil, etc). The questionnaire also asked for information about practice—when it began, type of practice (solo or group, size, single, or multispecialty), number of newborns admitted per month, average number of patients seen in a typical day, and size of patient catchment area. Respondents were also asked to rate the importance of several learning activities to the development of the management approach. The learning activities included residency training, medical literature, discussions with colleagues, continuing education courses, observation of another physician, and experience in practice.

Results

The majority of respondents were in a group practice and 33% in multiple-specialty groups, 31% in single-specialty groups, and 9% in other kinds of clinics (eg, academic, public health, military, etc). Somewhat over half (58%) of those in group practice had four or fewer partners. Fifty-eight percent of the respondents practiced in metropolitan areas (population of 150,000 or more), 24% in urban areas (population of 50,000 to 150,000), 17% in suburban areas (population 10,000 to 50,000), and 2% in rural areas (population < 10,000). No significant difference was found between the type of practice groups and geographic regions of practice sites within the state.

MANAGEMENT

When analyzed by type of management chosen, the five conditions fell into three distinct groups based upon use of medications (Fig 2): (a) temper tantrums, separation anxiety, and school phobia; (b) chronic abdominal pain; and (c) nocturnal enuresis.

For management of temper tantrums, separation

anxiety, and school phobia, no respondents used *only* medications. The majority reported using counseling and/or behavior modification without medication: 96%, 94%, and 95%, respectively, for temper tantrums, separation anxiety, and school phobia. Use of sedatives and benzodiazepines was reported by 6% and 1% of respondents, respectively. Consultation or referral to other practitioners, usually psychologists, was used for the occasional unusual or intractable case.

For management of chronic abdominal pain, 2% of respondents utilized only medications while 32% reported never using medications. For the majority (66%), medications were combined with counseling, behavior modification, consultation, and/or referral. Spasmolytics were used "sometimes" by 57% of the respondents and "often" by 11%. Radiologists and gastroenterologists were chosen for consultation and/or referral.

For management of nocturnal enuresis, 2% of respondents used only medications, while 29% reported never using medications. For the majority (66%), medications were combined with counseling, behavior modification, consultation, and/or referral. Tricyclics (presumably Tofranil) were used "sometimes" by 3% and "often" by 69% of respondents. Radiologists and urologists were chosen for consultation and/or referral.

RESPONDENTS

When analyzed by choice of management, respondents fell into three distinct groups based upon use of medications (Fig 3). Group 1 respondents (13% of the total), did not prescribe medications for any of the five disorders. Group 2 respondents (81% of the total) did not use medication for temper tantrum or separation anxiety, and only one respondent in this group reported using medications for school phobia. On the other hand, members of this group tended to combine medications with counseling, behavior modification, consultation, and referral for chronic abdominal pain and nocturnal enuresis. For chronic abdominal pain, 70% and 7% of the group 2 respondents, respectively, prescribed medications occasionally or often. For nocturnal enuresis, 4% and 77% of the group 2 respondents, respectively, used medications occasionally or often. Group 3 respondents (6% of the total) used medications for all five of the new morbidity disorders.

Comparison of the three groups demonstrated no significant difference for number of patients seen with each of the five disorders or for sex, ethnicity, site of residency training, status of board eligibility or certification, and subspecialty or interest area. Significant differences were found (Fig 3), however, for respondent age ($p < 0.01$), number of years in practice ($p < 0.01$), and average number of patients seen in a typical day ($p < 0.01$). The average ages

1. Definitions provided respondents to standardize description of disorders and management.

Counseling:
This represents brief advice, unplanned except for anticipatory guidance, given for management of a problem identified by the physician or by the parent (eg, "Oh, by the way").

Behavior modification:
A method of management which requires an agreed upon definition of both the undesired and desired behavior, and which over time employs various techniques for achieving the desired behavior (eg, time out, rewards, etc).

Consultation:
The act of obtaining advice/assistance from another, advice which may or may not be utilized in *your* management of the problem for which assistance was sought.

Referral:
Delegation to another of the responsibility for management of a specific problem, but not all of the patient's care.

Temper tantrum:
A learned attention-getting behavior, usually in response to frustration, utilized to get one's way (eg, crying, breath holding).

Separation anxiety:
Encompasses the greater than average difficulty parents/children incur with separation (eg, when an infant is left with the babysitter, at mother's day out, upon beginning school, or going away to summer camp).

School phobia:
This is a nontruancy form of school avoidance by the child who displays symptoms of an illness on school mornings, symptoms which resolve during the day in association with not attending school or being sent home from school, and which are usually not present on weekends or school holidays.

Chronic abdominal pain:
Recurrence, over time, of abdominal pain without evidence of organic etiology.

Bed wetting:
Wetting of the bed more than four times per month; not associated with either daytime wetting or encopresis.

2. Groupings of five new morbidity disorders according to use of medications revealed by survey.

	Medications Never Used	Medications Sometimes Used	Medications Often Used
Group A:			
Temper tantrums	96%	4%	0%
Separation anxiety	94%	5%	1%
School phobia	95%	4%	1%
Group B:			
Chronic abdominal pain	32%	57%	11%*
Group C:			
Nocturnal enuresis	29%	3%	69%*

*2% use medications only

3. Significant differences (age, number of years in practice, average number of patients seen per day) between respondents grouped according to their use of medications for five new morbidity disorders.

	Percent of Respondents	Average Age/Years	Average Years in Practice	Average Number of Patients Seen Per Day
Group I	13%	40.5	7.4	20.0
Group II	81%	43.8	12.8	27.1
Group III	6%	59.0	23.5	32.5

of the groups were 40.5 years (group 1); 43.8 years (group 2); and 59 years (group 3). The average numbers of years in practice were 7.4, 12.8, and 23.5 years for groups 1, 2, and 3, respectively. The average numbers of patients seen in a typical day were 20.0, 27.1, and 32.5 for groups 1, 2, and 3, respectively (Fig 3).

Group 1, those not using medications for any of the five disorders, were the youngest (average 40.5 years of age), had been in practice the shortest period of time (average, 7.4 years), and saw the fewest number of patients in a typical day (average 20.0). Group 3, those who incorporated medications in the management of all five of the disorders, were the oldest (average 59.0 years of age), had been in practice the longest period of time (23.5 years), and saw the greatest number of patients in a typical day (32.5). Group 2, those who limited use of medications to chronic abdominal pain and nocturnal enuresis, were an average of 43.8 years of age, had been in practice 12.8 years, and saw 27.1 patients in a typical day.

IMPORTANCE OF LEARNING ACTIVITIES

Thirty-three percent of respondents reported that a combination of learning activities beginning in residency and extending through practice were most important in how they learned to manage the disorders. Thirty-one percent reported experience in practice most important. One-fourth of the respondents identified as most important other learning experiences such as reading the literature, observing colleagues, and attending continuing education courses. Only 10% reported residency as the most important learning experience.

Discussion

This study of the current management of new morbidity disorders by pediatricians in Texas was designed to determine how physicians use medications to treat minor developmental and behavioral conditions in children.

Our survey of a randomly chosen, representative sample of pediatricians practicing in Texas in 1985 demonstrated management techniques that tended to be both practitioner- and problem-specific for five "new morbidity" disorders of childhood. Respondents were almost unanimous in the management of temper tantrums, separation anxiety, and school phobia without use of medication. In contrast, over two thirds of respondents prescribed medication for the management of chronic abdominal pain and nocturnal enuresis. Their frequency in using medication was problem specific, sometimes for chronic abdominal pain and often for nocturnal enuresis.

In keeping with current recommendations (5), all respondents used counseling and/or behavior modification for temper tantrums, separation anxiety, and school phobia. This was combined with consultation and/or referral, usually with psychologists, by 14%, 29%, and 54% of practitioners for temper tantrums, separation anxiety, and school phobia, respectively. Medications, usually sedatives and benzodiazepines, were also added to the management regimen by 4%, 6%, and 5% of respondents for temper tantrums, separation anxiety, and school phobia, respectively.

Use of medication only was reported by 2% of respondents for the management of both chronic abdominal pain and nocturnal enuresis. Two thirds of the respondents reported the use of medications in combination with counseling, behavior modification, consultation, and/or referral for management of these two disorders. In contrast, 32% and 29% of respondents reported managing chronic abdominal pain and nocturnal enuresis, respectively, without ordering medications. Of these latter practitioners, about half offered counseling and/or behavior modification alone, while the other half combined this with consultation and/or referral.

The division of practitioners among those who use or do not use medications for chronic abdominal pain and nocturnal enuresis reflects the conflicting recommendations reported in current literature for these two disorders (5–8). For chronic abdominal pain, spasmolytic medications were chosen, and radiologists and gastroenterologists were chosen for consultation and/or referral. For nocturnal enuresis, tricyclic antidepressant medications (presumably Tofranil) were chosen, and radiologists and urologists were selected for consultation and/or referral.

In general, the respondents tended to follow one of three relatively predictable patterns for management of all five disorders. The majority of respondents did not utilize medications for temper tantrums, separation anxiety, or school phobia. They did, however, employ medications in combination with counseling, behavior modification, consultation and/or referral, sometimes for the management of chronic abdominal pain and often for nocturnal enuresis. A significant proportion of respondents (13%) did not order medications for any of the five disorders. In contrast, a small group of respondents incorporated medications in the management of four of the five disorders; 6% combined medications with other management methods for separation anxiety and school phobia; and only 2% used medication alone for chronic abdominal pain and nocturnal enuresis.

When considering reasons why different management techniques are used by pediatricians to deal with the "new morbidity" disorders, a number of explanations are plausible. The more common one, however, relates to management techniques that were taught during residency training. Several studies have demonstrated that many practicing pedia-

tricians are uncomfortable in the management of children with the "new morbidity" and have recommended that significant modifications should be implemented in pediatric housestaff training programs to correct these alleged deficiencies (4,9–11).

Pediatric residency programs have changed over the past ten to 25 years, specifically with regard to implementing required training programs to teach residents how to evaluate and manage these "new morbidity" disorders (4,9,10,12). The effect of change in training over time, which seems a probable explanation for the observed differences reported in this paper, will be the subject of further investigation.

REFERENCES

1. Boyce WT: Stress and child health: an overview. Pediatr Ann 14(8):539–542, 1985.
2. Changing requests for care: general pediatricians. Pediatrics 62(4):640–651, 1978.
3. Nader PR, Ray L, Brink S: The new morbidity: use of school and community health care resources for behavioral, educational, and social-family problems. Pediatrics 67(1):53–60, 1981.
4. Starfield B, Gross E, Wood M, et al: Psychosocial and psychosomatic diagnoses in primary care of children. Pediatrics 66(2):159–167, 1980.
5. McDaniel KD: Pharmacologic treatment of psychiatric and neurodevelopmental disorders in children and adolescents (Part 1). Clin Pediatr (Philadelphia) 25(2): 65–71, 1986.
6. Shelov SP, Gundy J, Weiss JC, et al: Enuresis: a contrast of attitudes of parents and physicians. Pediatrics 67(5):707–710, 1981.
7. Shapiro SR: Enuresis: treatment and overtreatment. Pediatr Nurs 11(3):203–214, 1985.
8. Farrell MK: Abdominal pain. Pediatrics 74(5 Pt 2): 955–957, 1984.
9. Dodge WF, Chase RR Jr, Hill FD, et al: Pediatrics: patterns of change. Report from the Committee on Manpower of the Texas Chapter, American Academy of Pediatrics, and the Texas Pediatric Society. Tex Med 74:49–54, 1978.
10. Goldberg ID, Regier DA, McInerny TK, et al: The role of the pediatrician in the delivery of mental health services to children. Pediatrics 63(6):898–909, 1979.
11. Kempe CH: The 1978 presidential address of the American Pediatric Society. The future of pediatric education. Pediatr Res 12(12):1149–1151, 1978.
12. Yancy WS: Behavioral pediatrics and the practicing pediatrician. Pediatr Clin North Am 22(3):685–694, 1975.

For additional resources on this topic, see the MORE ON THE SUBJECTS department in this issue.

The University of Texas Health Center at Tyler
announces

GERIATRICS BOARD CERTIFICATION REVIEW COURSE

March 16-18, 1988
Tyler, Texas

A 2½-day intensive board-preparation course (Wednesday afternoon, Thursday and Friday) for the Geriatric Board Exam scheduled April 20, 1988

- Excellent hotel and meeting accommodations
- Outstanding nation-wide faculty

FEE $300
(includes continental breakfast & lunch each day)

For additional information contact the
Department of Medical Education,
The University of Texas Health Center
P.O. Box 2003, Tyler, TX 75710
or Phone 1-800-442-8842.

"LOOK TO US FIRST FOR A CAREER"

The University of Texas Medical Branch at Galveston is seeking applicants for employment with the Texas Department of Corrections for the position of:

MEDICAL DIRECTOR

This individual must hold a current license to practice medicine in the State of Texas. Applicants are being sought who possess strong clinical (10 years) and supervisory/administrative (3 years) experience in health care delivery preferably in an institutional setting. The Medical Director is responsible for medical services program in the Texas Department of Corrections and reports directly to the Director of the Texas Department of Corrections. Salary $100,000 to $120,000. Excellent fringe benefits with no state income tax. Please send curriculum vitae to:

Texas Department of Corrections
Medical Personnel
P.O. Box 99
Huntsville, Texas 77342-0099
(409) 294-2755

AN EQUAL OPPORTUNITY EMPLOYER M/F

TDC Texas Department Of Corrections

◆TMLT◆

KEEPING THE ODDS IN YOUR FAVOR

The current litigation explosion means that Texas physicians must cope in a volatile liability arena. Never before have reliable insurance services been so important nor selection of your insurance carrier more meaningful.

INTEGRITY . . . the most critical ingredient in choosing appropriate protection. It means your insurance policy is backed by a genuine intent to keep the odds in your favor.

TMLT has set a standard of medical liability protection. Our very concept of insurance means integrity. Call us. The Texas Medical Liability Trust - exclusively for Texas physicians.

TEXAS
MEDICAL
LIABILITY
TRUST

THE STANDARD HAS BEEN SET

Statewide Service Center: 1-800-252-9179/P.O. Box 14746, Austin, Texas 78761

MARK J. KUBALA, MD

CARL E. SHRONTZ, MD

All-terrain vehicle accidents

Serious and fatal injuries as a result of three-wheeled all-terrain vehicle (ATV) accidents have increased significantly in the past few years. To better understand the number of ATV-related injuries and factors associated with them in the Beaumont (Texas) area, we reviewed records of patients hospitalized for trauma at two hospitals in a two-year period. We report our findings in this article and discuss three factors (driver, vehicle, and terrain) that interract in an ATV accident. Studies and recommendations from the Consumer Product Safety Commission's ATV Task Force are also presented.

All-terrain vehicles (ATVs) are motorized off-the-road three- or four-wheeled cycles, with balloon-like soft tires, for use in sand, mud, and other surfaces. ATVs have handlebars for steering and a seat to be straddled by a single operator. Although designed primarily for recreation, they are also used by farmers and hunters. ATVs typically have gasoline-powered engines of 50 to 250 cc displacement. Many have no rear axle differential and a limited suspension system.

First introduced in the late 1960s, the ATV began a new surge of popularity in the early 1980s. Sales increased from 136,000 units in 1980 to 2.4 million in six years (7). Most ATVs are imported from four Japanese manufacturers (Honda, Yamaha, Suzuki, and Kawasaki). Most ATVs are individually owned, but others are rented by the hour or day.

ATVs are intended for off-the-road use and therefore are exempt from regulation by the Federal Department of Transportation National Highway Traffic Safety Administration. They are not subjected to the Federal Motor Vehicle Safety Standards or to the Texas Department of Public Safety Standards. The Consumer Product Safety Commission (CPSC) is the only federal agency with jurisdiction to regulate ATVs. In early 1984 the CPSC began an investigation into the serious safety problems of ATVs (7).

The total number of shipments declined last year, but the total number of four-wheeled ATVs increased. This study focuses on accidents as a result of "three-wheelers" since insufficient data is available on four-wheeler accidents.

In the past few years, several reports have appeared in medical literature describing the trauma associated with ATVs, particularly in young children. In 1985, 12 serious or fatal injuries were reported in children ages from 3 to 12 years old, all in rural areas and from relatively affluent families (1).

Severe head injuries, spinal cord injuries, and deaths have been reported in children (2,3). Statistics show that 2.5% of all pediatric trauma at the University of Virginia Hospital between 1983 and 1985 was due to ATV injuries (4). The CPSC estimate of ATV-related injuries treated in the hospital emergency rooms grew from 8,600 in 1982 to 85,900 in 1985 (5). The CPSC had reports of 559 ATV-related deaths occurring between January 1982 and July 1986 (5).

The authors, 3260 Fannin, Beaumont, TX 77701. Send reprint requests to Dr Kubala.

Methods

To better understand the number of ATV-related injuries and factors associated with them in the Beaumont area, we reviewed records of patients hospitalized at two hospitals from July 1, 1984, to June 30, 1986. The two Beaumont hospitals were St Elizabeth Hospital and Southeast Texas Baptist Hospital. We excluded those injuries treated in the hospital emergency rooms, as these have been reported elsewhere (6).

Results

During this two-year period, there were 1,679 hospitalizations for trauma, 464 of which were due to motor vehicle accidents. ATVs were responsible for injuries to 25 patients, most of them young: four were less than 13 years old, five teenagers, nine from 20 to 30 years old, and seven over the age of 30. Most of the drivers were white males. Only one was known to wear a protective helmet.

Eleven of the 25 sustained a head injury. Six had concussions and scalp lacerations. Two had moderate closed head injury with linear skull fractures and cerebral contusions. There were three severe closed head injuries; two died, and one remained vegetative. Four of the injuries were primarily to the face with facial fractures and lacerations. There were two cervical spine injuries, one with paralysis. Two patients had fractures of the upper extremities, and five had fractures of the lower extremities. There was one chest injury with fractured ribs.

Discussion

Controlling an ATV requires complex interaction between the driver, vehicle, and the environment.

VEHICLE FACTORS

The handling characteristics of three-wheeled ATVs are complex. The operator must use the weight shift and steering angle to execute a turn. The two widely spaced and highly frictional rear wheels impart a large straight-ahead directional stability. To overcome this directional stability, the operator must lean the vehicle toward the outside of the turn. This weight shift increase tends to overturn the vehicle.

ATVs are usually equipped with front wheel brakes. Sudden application of the brakes may overturn the ATV traveling in a straight line. This becomes even more likely if the brakes are applied during a turn as the inertial forces increase.

The three-wheeler design consists of an isosceles triangle with an apex of 37 degrees and a foot peg located two fifths of the way from the apex to the base of the triangle. This design could be rendered more stable by an increase in the wheel base and the righting moment of the vehicle (5).

The four-wheeled ATV has more stability than the three wheeler. The righting moment is greater and thus tends to keep the vehicle upright. CPSC data indicate that 74% of three-wheel ATV accidents started with tipping or overturning compared to 59% for four-wheeled ATVs (6).

Several factors would improve the stability of the vehicle:

1. Lowering the seat would lower the center of gravity; unfortunately a low seat would not clear the irregular terrain for which the vehicle was designed.
2. A less powerful engine would produce slower acceleration and make the vehicle more stable.
3. The engineering science staff of CPSC found that suspension systems improved handling by reducing the magnitude of the transmitted forces and allowing more reaction time.

Engineering science tests indicated that machines with well designed suspension systems, front and rear, significantly reduced the inertial and pitch response of the ATV, compared to only limited-suspension ATVs (6).

ENVIRONMENTAL FACTORS

Some 10% of ATV accidents occur on paved roads, and 8% occur at night (6). An inexperienced operator will often observe an obstacle, but not expect it to be a hazard. A driver with better judgment takes care to avoid such an obstacle. Similarly, accidents may be caused by excessive speed. Only 11% of accidents involved collisions with other vehicles (7).

OPERATOR FACTORS

Young riders are less able physically and mentally than older riders to control ATVs. The CPSC human factor staff found that body size and motor abilities are insufficiently developed (along with cognitive and perceptual abilities) to permit safe ATV operation by children under 12 years of age. Children below the age of six years are physically too small and insufficiently coordinated to operate even the smallest ATV models, and children 6 through 11 years old still lack the cognitive and perceptual abilities to do so safely. Their motor abilities still tend to be erratic and slower than desirable. According to the medical review of the 284 in-depth investigations, cognitive development in small children is inadequate to allow reasonable judgment, visual perceptions are immature, and reaction times are too slow. Adequate maturity and judgment are often not inherent in children, pre-adolescence, or even teenagers (8).

A hazard analysis carried out by the commission's directorate for epidemiology shows that all drivers under 16 years of age had a relatively higher risk of injury on adult-sized ATVs with engines of 90 cc displacement or greater. There was a fourfold greater risk of injury to children under 12 years of age operating adult-sized ATVs, compared to smaller ATVs. According to the medical director, a large portion of this excess risk can be attributed to behaviorial immaturity. The human factors study indicated that young operators may lack the physical and judgmental abilities to control ATVs. Poor judgment was noted in 31% of the fatal accident cases, and insufficient proficiency in 22% (8).

Risk-taking propensities increase accidents. Poor judgment indicators for ATV riders include carrying passengers, riding after drinking alcohol or using controlled substances, and riding at excessive rates of speed (8). Thirty-one percent of ATV accidents involve carrying passengers. The presence of a passenger frequently impedes the movement and actions of the driver. Fourteen percent of all accidents with injuries mentioned alcohol consumption by the operator. Thirty percent of reports of all fatal accidents mentioned alcohol. Medical analysis indicates that excess speed was involved in 30% of the fatal accidents investigated. An operator's decision not to wear protective equipment or clothing is another example of poor judgment that can determine the severity of an accident. This is most obvious in the failure to use well-constructed, well-fitting helmets. Approximately 79% of the occupants in the fatal accidents wore no helmet. Many of the helmets worn were of the inexpensive variety and provided low levels of protection. It is estimated that 25% of those who die from head injuries probably would not have died if they had been wearing proper helmets (9).

Operator judgment is also reflected in risk taking. It is well known that young males take more risks than others. For a 20-year-old experienced man on a three-wheeled 200 cc ATV, the probability of an accident is 3.6%; for a 40-year-old man, in identical circumstances, the probability is 2.2%, and for a 20-year-old woman, the probability is 1.4% (9).

STATE LEGISLATIVE REQUIREMENTS

The Specialty Vehicle Institute of America (SVIA) reviewed state ATV laws and regulation. Sixteen states have laws in part or in whole that apply specifically to ATVs. Of the remaining 34 states, 18 have laws or regulations pertaining to off-road vehicles (11).

Thirteen states require operator helmet protection. However, there is great variation in age restriction, land use supervision, possession of a state safety certificate, or regulations governing helmet protection in competitive events.

Twenty-one states have set a minimum age for ATV operation. Yet, in 17 of these states, the respective age minimum (ranging from 12 to 16 years old) does not apply if the youngster is being supervised. In some other states the restriction may be waived if the rider has a safety certificate or when the rider is on public lands (9).

Twenty-six states now require ATVs to be registered through state departments of motor vehicles or through recreational management agencies. The Texas Legislature passed regulations for use of ATVs. The law, which takes effect on Jan 1, 1988, establishes several safety-related requirements, including age restrictions and adult supervision, prohibition of passengers, operator training, vehicle registration, vehicle modification restrictions, and safety equipment (eg, helmets and eye protection) (10).

In April 1985, the CPSC, in response to the reports of numerous injuries and deaths associated with ATVs, established an ATV task force made up of commissioned staff representing a broad range of technical disciplines. Public hearings were held throughout the country in 1985 and 1986. Engineering sciences specialists studied the vehicle construction, human factors were studied by the Essex Corporation, and economic analysis was carried out by Market Facts, Inc. The Specialty Vehicle Institute of America indicated their willingness to begin developing voluntary standards in 1985. In September 1986, SVIA provided the commissioned staff with a partially completed draft of voluntary standards. The CPSC felt these were inadequate. Provisions did not include adequate requirements for specific and uniform labeling of ATVs, adequate minimal age recommendations, adequate requirements for standardized controls on ATVs, or acceptable performance requirements. A second phase of voluntary standards by SVIA intends to include performance and handling characteristics of ATVs.

The major findings resulting from the ATV Task Force's work were (7):

1. Children under 12 years of age are unable to operate any size of ATV safely. This is because they lack adequate physical size and strength, cognitive abilities, motor skills, and perception.

2. Children under 16 years of age are at greater risk of injury and death than adults when operating adult-sized ATVs. This is due to poor judgment and failure to recognize and operate ATVs at the proper skill level.

3. The risk of injury declines significantly with ATV riding experience.

4. Thirty percent of all fatal ATV accidents were associated with alcohol use. Fourteen percent of all reported accidents with injuries referenced alcohol consumption by the operator.

5. Thirty-one percent of the ATVs involved in accidents were carrying passengers.

6. Well-constructed, well-fitting helmets could substantially reduce the number of fatal head injuries to ATV operators.

7. Seventy-four percent of three-wheeled ATV accidents involved tipping or overturning compared to 59% for four-wheeled ATV accidents.

8. The dynamic stability of four-wheeled ATVs is better than that of three-wheeled ATVs.

9. The handling performance of an ATV is strongly influenced by its suspension system; a properly tuned mechanical suspension for front and rear wheels is better than front-only or tire-only suspended ATVs.

10. The majority of state governments have no laws regulating the use of ATVs. Where the laws do exist, they are not uniform from state to state.

11. The initial draft industry voluntary standards are inadequate in addressing the risks of injuries related to ATVs.

Conclusion

Serious and fatal injuries as a result of three-wheeled ATVs are now well documented. Japan now is exporting primarily four-wheeled ATVs. Some predict that within two years no three-wheeled ATVs will be imported. The safety of the four-wheelers remains to be determined. In the meantime several million three-wheeled ATV units in this country remain in use. It is hoped that physician and public awareness of the risk factors described will reduce the number of accidents.

REFERENCES

1. Golladay ES, Slezak JW, Mollitt DL, et al: The three-wheeler—a menace to the preadolescent child. J Trauma 25(3):232–233, 1985.

2. Sneed RC, Stover SL, Fine PR: Spinal cord injury associated with all-terrain vehicle accidents. Pediatrics 77(3):271–274, 1986.

3. Jenkerson S, Middaugh J: Injuries associated with three-wheel all-terrain vehicles—Alaska. MMWR 34(15):213–215, 1985.

4. Stevens WS, Rodgers BM, Newman BM: Pediatric trauma associated with all-terrain vehicles. J Pediatr 109(1):25–29, 1986.

5. Newman R: Update of ATV deaths and injuries. Washington, DC, US Consumer Product Safety Commission, Sept 1986.

6. Deppa RW: A discussion of the dynamic characteristics of all-terrain vehicles. Washington, DC, US Consumer Product Safety Commission, April 1984.

7. Report of the Consumer Product Safety Commission All-Terrain Vehicle (ATV) Task Force, Washington, DC, Sept 30, 1986.

8. Rutherford G, Kennedy J: Updated injury data on all-terrain vehicles. Washington, DC, US Consumer Product Safety Commission, Feb 11, 1985.

9. Esch AF: Medical report on ATV project. Washington, DC, US Consumer Product Safety Commission, Sept 25, 1986.

10. SB 939, 70th Texas Legislature (1987), Regular Session, Chapter 260 (amending article 6675a et seq and article 6701c-5 Tex Rev Civ Stat Ann).
11. Koeser R, Liskey I: All-terrain vehicles in the states. Washington, DC, US Consumer Product Safety Commission, Sept 23, 1986.

For additional resources on this topic, see the MORE ON THE SUBJECTS department in this issue.

OPPORTUNITY FOR PHYSICIANS

General Practitioners
Obstetricians Gynecologists
Urologists

There is an immediate need for physicians in these areas to further develop their practices within a well-established Dallas clinic. Affiliation assures you:
- Heavy patient load
- Central appointment scheduling
- Infectious disease treatment experience
- Active marketing program

This is an excellent opportunity for doctors wishing to relocate, expand or start a practice.

For more information, write: AD-684, Texas Medicine, 1801 N. Lamar Blvd., Austin, TX 78701

Equal Opportunity Employer

SOUTHWEST MEDICAL ASSOCIATES

ENDOCRINOLOGIST NEEDED

BC/BE to join our large multispecialty practice group in Las Vegas, Nevada. This is an excellent practice opportunity in a growing area (population 500,000+). Fee for service and prepaid health care.

Excellent benefit package including full pension, profit sharing, paid malpractice insurance and relocation.

Send CV and three references to:

SOUTHWEST MEDICAL ASSOCIATES
Employment
P. O. Box 15645
Las Vegas, NV 89114-5645

Equal Opportunity Employer

Go ahead, push your hot button.

You've always wanted a BMW. You just didn't think you could afford the German engineering, the styling, the features that make a BMW, a BMW. But here's proof --the BMW Center can put you right on the button.

1988 325i Convertible	1988 528	1988 735i
$296.00/mo.*	$365.23/mo.*	$599.04/mo.*

NO CASH DOWN AVAILABLE

8.4% Financing thru BMW Credit Corp. available till Dec. 31, 1987

The New BMW

1988 M-Series Cars are Here
M-3, M-5, M-6

BMW CENTER

THE FASTEST GROWING BMW DEALER IN THE NATION.

4623 Fredericksburg Road @ Loop 410 San Antonio **(512) 732-7121**

*Payments based on 60-month flex purchase. Trade-In or 16% down payment, plus tax, title and license fees with approved credit. Residual of $15,712.50, 325i Convertible; $12,988.50, 528; $21,415.80, 735i. 8.4% A.P.R. on convertible and 11.9% A.P.R. on 528 & 735i. Program through BMW Credit Corp. and subject to cancellation due to dealer availability.

PATRICIO A. PAZMIÑO, PhD, MD

Suprofen-induced acute renal failure

Patricio A. Pazmiño, PhD, MD, Assistant Professor, Department of Internal Medicine, Texas Tech University Health Sciences Center, El Paso. Send reprint requests to Dr Pazmiño, Nephrology, Internal Medicine and Hypertension Center, 1701 N. Mesa, Suite 101, El Paso, TX 79902.

A case of nonoliguric acute renal failure occurring after two doses of suprofen is reported. The patient presented with severe back and flank pain, microhematuria, abnormal creatinine levels, and abnormal creatinine clearance. A percutaneous kidney biopsy under ultrasound guidance revealed changes consistent with IgA nephropathy. There was a gradual resolution of the renal insufficiency upon discontinuation of the suprofen, and a year later the urinalysis and creatinine were back to normal.

Suprofen (Suprol, McNeil Pharmaceutical) is a new nonsteroidal anti-inflammatory agent with analgesic properties, which has been in clinical use in this country for a relatively short time. I report here a case of nonoliguric acute renal failure associated with suprofen and wish to alert clinicians to the potential nephrotoxicity of suprofen that may occur after one or two doses.

A 35-year-old white male presented to the emergency room on Feb 18, 1986, for evaluation of a reaction to suprofen. He denied fever, chills, rash, arthralgia, or urinary tract symptoms. One week previously he had been evaluated at another clinic following a minor motor vehicle accident and was prescribed an analgesic cream and acetaminophen to be used as needed. Because of a neck sprain, he was seen again one week later and was instructed to take Suprol (200 mg orally every six hours). Five hours after the second dose, he came at midnight to the emergency room complaining of severe low back and flank pains. The physical examination showed a blood pressure of 110/78 mm Hg, pulse 80 per min, respiratory rate 16 per min, and a temperature of 36.8° C (98.3° F). The remainder of the physical examination was unremarkable except for tenderness to percussion and deep palpation in the renal areas.

Initial laboratory studies showed a serum creatinine of 2.7 mg/dL (238.7 μmol/L), a urinalysis revealed trace protein, 9 to 12 red blood cells per high power field, with no casts or crystals. The hematocrit was 44.2%, white blood count was 10,000 with 72 segmented leukocytes, 1 band, 20 lymphocytes, 6 monocytes, and 1 eosinophils. Results of the following tests were normal or negative: SGOT, SGPT, LDH, bilirubin, alkaline phosphatase, RPR (rapid plasma reagin), electrolytes, uric acid, ASO (antistreptolysin O), ANA (antinuclear antibodies), complements C3 and C4, IgA, IgE, IgM, sedimentation rate, urine culture, and a urine toxicology screen for 34 substances. The creatinine clearance was 49 and 46 mL/min/1.73 m^2, and the protein excretion was 41 mg/day and 18 mg/day on two different 24-hour urine collections.

Radiological studies after admission included: KUB, renal sonogram, renal flow and kidney scan, bone scan, and urethrocystoscopy, plus a bilateral retrograde pyelogram. All of these studies were within normal limits, except for a delay in the renal excretion of the radioisotope given for the bone scan.

Because of unexplained renal insufficiency, a kidney biopsy was done with ultrasound guidance. The biopsy findings were consistent with an IgA nephropathy. There was no evidence of acute tubular necrosis, interstitial nephritis, or uric acid nephropathy. Discontinuation of suprofen after admission was followed by a gradual recovery of the renal function over eight days with the creatinine decreasing from 2.7 mg/dL (238.7 μmol/L) to 1.4 mg/dL (123.8 μmol/L). A review of the patient's records revealed the presence of intermittent microhematuria dating back to 1977 and a normal BUN, creatinine level, and excretory urogram in the past. On follow-up 15 months later, repeat urinalysis was normal and creatinine clearance was 120 mL/min/1.73 m^2.

Acute renal failure secondary to prostaglandin inhibitors is becoming a common occurrence in clinical nephrology (1,2). This case is unusual in that it occurred after only two doses of suprofen and the patient presented with moderate flank pain, observations not previously described in other cases of acute renal failure associated with other nonsteroidal drugs. To my knowledge, this is one of the first reported cases of acute renal failure associated with suprofen and the only one in which a kidney biopsy was performed. A recent review of the literature that includes 274 cases of acute renal disease associated with the use of nonsteroidal anti-inflammatory drugs does not include reports attributing renal failure to suprofen. However, it was noted that a chemically related drug, fenoprofen, appears to be the most nephrotoxic of this group of drugs (3). An inquiry in October 1986 to the manufacturer and Food and Drug Administration (FDA) revealed that more than 100 cases similar to ours, involving suprofen, have been reported to the company. The frequency of this occurrence was estimated by the FDA at that time to be at least 1:5,000 cases. Hemodynamic deterioration associated with renal prostaglandin inhibition may have accounted for the changes noted in the renal function.

A recent panel has suggested guidelines to minimize the nephrotoxic effects of nonsteroidal anti-inflammatory drugs and has identified patient groups most susceptible to acute reduction in glomerular filtration rate during therapy with nonsteroidal anti-inflammatory drugs (4). The guidelines should be followed, and urinalysis should be done. The possiblity of inducing acute renal failure should be considered when suprofen or other nonsteroidal anti-inflammatory agents are prescribed.

REFERENCES
1. Schrier RW, Henrich WL: Nonsteroidal anti-inflammatory drugs. Caution still indicated, editorial. JAMA 251(10):1301–1302, 1984.
2. Clive DM, Stoff JS: Renal syndromes associated with nonsteroidal anti-inflammatory drugs. N Engl J Med 310(9):563–572, 1984.
3. Carmichael J, Shankel SW: Effects of nonsteroidal anti-inflammatory drugs of prostaglandins and renal function. Am J Med 78(6 Pt 1):992–1000, 1985.
4. Zipser RD, Henrich WL: Implications of nonsteroidal anti-inflammatory drug therapy. Am J Med 80(1A):78–84, 1986.
5. Abreo K, La Barre J: Suprofen, acute renal failure, and hematuria, letter. Ann Intern Med 105(5):799, 1986.
6. Davis NS, Spital A, Kamm DE: Suprofen and acute renal failure, letter. Ann Intern Med 105(6):976–977, 1986.
7. Hart D, Ward M, Lifschitz MD: Suprofen-related nephrotoxicity. A distinct clinical syndrome. Ann Intern Med 106(2):235–238, 1987.
8. Wolfe SM: Suprofen-induced transient flank pain and renal failure, letter. N Engl J Med 316(16):1025–1026, 1987.

ACKNOWLEDGMENTS
The author gratefully acknowledges the referral of this patient by Dr Guillermo Pinzon and the pathologic interpretation supplied by Dr Michael Hughson.

NOTE: Information from this article was originally reported to McNeil *Pharmaceutical* on March 21, 1986, and submitted to *Texas Medicine* in October 1986. Other investigators (5-8) have reported similar findings, and suprofen has been removed from the market.

Help your Patients Understand AIDS with TMA'S Brochure:

Facts You Should Know About AIDS

When your patients ask about AIDS, can you give them ready answers? TMA's updated brochure can help you allay the public's fears caused by rumor and false information. It tells readers how to reduce or eliminate their chances of contracting AIDS. Originally produced in 1986, the brochure was updated in August 1987 by your TMA Committee on Sexually Transmitted Diseases. The brochure is designed for use in waiting rooms or as a statement stuffer.

Copies are free to TMA members except for a shipping cost of $2.50 for orders of 500 or less and $5 for up to 1,500. For larger orders, please inquire about charges. Nonmembers pay 5 cents per copy, plus 8 percent tax and shipping charges. The brochures must be ordered in increments of 50 and prepaid.

To receive a sample copy of **"Facts You Should Know About AIDS"** and an order form, mail this form to: Texas Medical Association, Communication Department, 1801 North Lamar Blvd., Austin, Texas 78701.

name

address

city state zip

TOM YOUNGBLOOD, MD
ANITA CAVALLO, MD
ARMOND S. GOLDMAN, MD
GEORGE T. BRYAN, MD
WALTER J. MEYER III, MD

Complications of intramuscular glucocorticoids

Tom Youngblood, MD, University of Florida, College of Medicine, Department of Pediatrics, Gainesville, FL; Anita Cavallo, MD, Department of Pediatrics, Emma Pendleton Bradley Hospital, East Providence, RI; Armond S. Goldman, MD, Department of Pediatrics, George T. Bryan, MD, Department of Pediatrics, and Walter J. Meyer III, MD, Departments of Pediatrics and Psychiatry, The University of Texas Medical Branch, Galveston, TX Send reprint requests to Dr Cavallo, Department of Pediatrics, Emma Pendleton Bradley Hospital, 1011 Veteran Memorial Parkway, East Providence, RI 02915.

In recent years, the use of intramuscular preparations of glucocorticoids in therapy has become widespread in clinical practice. The potency and duration of action of these drugs and the potential for the development of serious complications due to use of such preparations is often underestimated, as we illustrate in this report. We propose that intramuscular administration of intermediate or long-acting glucocorticoids be restricted to selective cases and be monitored with great care.

The introduction of corticosteroids to clinical medicine was a significant advance in the ability to control severe allergic and autoimmune diseases. Cortisol, the naturally occurring glucocorticoid, has significant action on salt and water balance and causes serious side effects when given in pharmacologic doses (1). The introduction of more potent glucocorticoid analogues enabled the achievement of much higher anti-inflammatory activity without a concomitant increase in major electrolyte and fluid balance problems. Certain parenteral preparations of such drugs provide prolonged duration of action, but also carry the risk of suppression of the hypothalamic-pituitary-adrenal axis and protracted side effects of hypercortisolism. Such side effects of long-acting steroid preparations may not be evident until several weeks after the administration and those complications may persist for months. We report three cases which illustrate the protean manifestations of the problem and the serious medical consequences of long-acting corticosteroid preparations.

Case reports

PATIENT 1—A 2⅓-year-old boy was first admitted to The University of Texas Medical Branch for generalized edema, a 4.5 kg weight gain, and hirsutism two months following discharge from another hospital. There he was treated for nephrotic syndrome but had received no medications since discharge. Physical examination revealed obesity, round facies, mild hirsutism, and arterial systolic hypertension (130 to 150 mmHg). Blood and urine samples were collected for laboratory studies. An immediate search for an adrenal tumor was undertaken while waiting for the hormone study results because of the striking clinical features of hypercortisolism (in a young child). An intravenous pyelogram, renal scan, renal perfusion scintigraphy, liver and spleen scans were normal. The 24-hour 17-hydroxycorticosteroids were 1.4 mg (normal range 0.2 - 2.5 mg), and the 24-hour 17-ketosteroids were 1.25 mg (normal < 2.0 mg). Plasma cortisol was undetectable. During this hospitalization, lipodystrophy of a small area on the buttocks (missed on initial examination) was discovered. Subsequent information from the physician who treated the child for nephrotic syndrome revealed that the patient had received 20 mg of triamcinolone acetonide intramuscularly twice a day for 12 days during the previous hospitalization two months earlier. Therefore, the diagnosis of iatrogenic Cushing's syndrome was made. The cushingoid appearance, hirsutism, and hypertension gradually resolved over the next 12 months.

PATIENT 2—This 9-year-old boy was in good health until he developed urticaria which was treated with an unknown injection. The eruptions promptly resolved only to recur in three days. Following a second injection, the eruptions disappeared. He was admitted to a local hospital one month later because of polyuria and weight gain of 6.5 kg. Results of urinalysis and tests of renal function were normal. His fasting serum glucose was 85 mg/dL. The 8 AM plasma cortisol concentration was < 1 μg/dL, and his 24-hour urinary cortisol excretion by radioimmunoassay was < 9 μg/day (normal = 20-90 μg/day). He was then transferred to The University of Texas Medical Branch. Physical examination revealed truncal obesity and mild hirsutism. Endogenous Cushing's syndrome was suspected, but the 8 AM plasma cortisol concentration (confirmed to be < 1 μg/dL) was inconsistent with that diagnosis. Further investigation revealed that the patient had received two (2 mL each) intramuscular injections of 3 mg betamethasone (as betamethasone sodium phosphate) and 3 mg betamethasone acetate (Celestone Soluspan). The patient was discharged with the diagnosis of iatrogenic Cushing's syndrome. Afterwards, the clinical features of Cushing's syndrome worsened, and the plasma cortisol concentrations remained low. Seven months after the initial injection of the long-acting glucocorticoid preparation, the patient began to lose weight, his cushingoid features disappeared, and his 8 AM plasma cortisol concentration rose to 7 μg/dL.

PATIENT 3—This 10½-year-old boy was well until he developed nasal congestion, cough, and some difficulty during both inspiratory and expiratory phases of respiration. He was treated with 8 mg of dexamethasone acetate (Decadron-LA) intramuscularly and intramuscular lincomycin. That evening he was unusually irritable. During the next days he cried inconsolably, screamed frequently, had partial memory loss, and expressed great fears about global problems and feelings of bodily distortion. He was treated with hydroxyzine, but his symptoms worsened.

Twelve days later he was admitted to The University of Texas Medical Branch. In addition to a voracious appetite, he had emotional lability with periods of depression, agitation, and frequent anxiety attacks. He also had hallucinations that the walls were moving. Physical examination revealed some

cushingoid effects with moon-like facies and centripetal obesity. His white blood cell count was 7,900 with 35% lymphocytes and 56% polymorphonuclear cells. His sedimentation rate was 8 mm/hr. An 8 AM plasma cortisol concentration was 12.8 μg/dL. His neurological examination was completely normal. Specifically, he had a normal sensory examination and no cranial nerve abnormality. His deep tendon reflexes were symmetrical 2-3+ with no Babinski sign. He had good muscle tone, strength, and coordination with no tremors or ataxia or problems with balance or gait. His anxiety and hallucinations abated over a three-day period, and he was discharged without medication. Most of his other symptoms completely disappeared over the next five weeks although he continued to experience some bouts of depression for the next few months.

Discussion

The side effects of high-dose glucocorticoid therapy have been well documented (2–5). In the case of orally administered glucocorticoids, these problems are readily attributed to the therapy. However, since the onset of side effects of long-acting glucocorticoid preparations may be delayed and the duration of these effects may be protracted, a cause-and-effect relationship between the medication and the sequelae is more difficult to establish. Indeed, although the duration of pharmacologic effect of the most commonly used glucocorticoid is well known (Fig 1) (4,6), the duration of side effects (including adrenal suppression) from intramuscular preparations of these compounds may be longer than expected.

An analysis of the clinical course of our three patients illustrates these issues. For example, patient 1 underwent an extensive search for an adrenal tumor because of the dramatic clinical manifestations of Cushing's syndrome. Even though the biological effect of a single dose of triamcinolone acetonide is reported to last 42 days (Fig 1), in patient 1 the glucocorticoid effect persisted for several months. The problem was probably compounded by the inappropriate use of repeated daily injections which probably formed a large reservoir of this compound. Indeed, the initial treatment of choice for this patient should have been oral glucocorticoids.

In patient 2, the combination of betamethasone sodium phosphate and betamethasone acetate caused progressive manifestations of glucocorticoid excess for four months, rather than the expected 7–14 days (Fig 1). Furthermore, the function of this patient's adrenal cortex remained suppressed for an even longer period of time.

Patient 3 experienced not only prolonged cushingoid effects from a single intramuscular injection of a potent corticosteroid analogue but also a relatively rare complication, psychosis, that persisted for weeks (7,8). The justification for the use of intramuscular corticosteroids was not clear, and the duration of the complication would have been limited if an oral form of the agent had been used.

When faced with the need to use a glucocorticoid preparation, careful consideration should be given to possible suppression of the hypothalamic-pituitary-adrenal axis (4,9,10), in addition to immunosuppression, electrolyte and fluid balance derangements, and the other well known features of glucocorticoid excess (2). The route of administration of glucocorticoid therefore should be chosen carefully. With rare exception, oral preparations of corticosteroids are preferred since this form of therapy offers greater flexibility in dose adjustment and permits selection of the smallest effective dose for chronic use. The side effects of corticosteroid therapy can thus be minimized.

In contrast, parenteral glucocorticoids should be reserved for highly selected cases. The safest forms are injectable glucocorticoids of short duration of action and are recommended when oral treatment is contraindicated. Glucocorticoids of intermediate duration of action should not be used intramuscularly in children because of their prolonged biological effects. Glucocorticoids of prolonged duration of action should be reserved for intralesional use in dermatologic problems such as keloids or hemangiomas (11,12) or for intra-articular use for certain orthopedic and rheumatoid problems (13,14). Even in these instances, their use is controversial and manifestations secondary to systemic glucocorticoid absorption may occur.

This report emphasizes the need for caution in the intramuscular administration of glucocorticoids that have an intermediate or prolonged duration of action. The potency and duration of action of these preparations may be underestimated. Such drugs

1. Duration of biological action of intramuscular and intralesional glucocorticoids. Adapted from Drug Information for the Health Care Provider, *USP DI (6).*

	Time (days)
A. Short:	
Hydrocortisone	1.25–1.5
Hydrocortisone acetate	3–4
Cortisone acetate	3–4
B. Intermediate:	
Dexamethasone acetate	6–21
Betamethasone sodium phosphate plus betamethasone acetate	7–14
C. Long:	
Dexamethasone	3–21
Prednisolone acetate	3–28
Methylprednisolone acetate	7–35
Triamcinolone hexacetonide	21–28
Triamcinolone acetonide	7–42
Triamcinolone diacetate	4–28

should therefore be restricted to cases where a high dose is desired locally and their use should be accompanied by awareness of the possibility of development of serious and protracted side effects.

REFERENCES

1. Liddle GW: The adrenals, in Williams RH (ed): Textbook of Endocrinology. Philadelphia, WB Saunders Co, 1981, pp 249–292.

2. David DS, Grieco MH, Cushman P: Adrenal glucocorticoids after twenty years. A review of their clinically relevant consequences. J Chron Dis 22:637–711, 1970.

3. Rimsza ME: Complications of corticosteroid therapy. Am J Dis Child 132(8):806–810, 1978.

4. Storrs FJ: Use and abuse of systemic corticosteroid therapy. J Am Acad Dermatol 1(2):95–106, 1979.

5. Mikhail GR, Sweet LC, Mellinger RC: Parenteral long-acting corticosteroids. Effect on hypothalamic-pituitary-adrenal function. Ann Allergy 31:337–343, 1973.

6. United States Pharmacopeial Convention, Drug Information for the Health Care Provider. USP DI, ed 6, Rockville, MD, 1986, pp 37–73.

7. Hall RC, Popkin MK, Stickney SK, et al: Presentation of the steroid psychoses. J Nerv Ment Dis 167(4):229–236, 1979.

8. Lewis DA, Smith RE: Steroid-induced psychiatric syndromes. A report of 14 cases and a review of the literature. Affective Disord 5(4):319–332, 1983.

9. Graber AL, Ney RL, Nicholson WE, et al: Natural history of pituitary-adrenal recovery following long-term suppression with corticosteroids. J Clin Endocrinol Metab 25:11–16, 1965.

10. Chamberlin P, Meyer WJ 3rd: Management of pituitary-adrenal suppression secondary to corticosteroid therapy. Pediatrics 67(2):245–251, 1981.

11. Murray JC, Pollack SV, Pinnell SR: Keloids: a review. J Am Acad Dermatol 4(4):461–470, 1981.

12. Nelson LB, Melick JE, Harley RD: Intralesional corticosteroid injections for infantile hemangiomas of the eyelid. Pediatrics 74:241–245, 1984.

13. Cryiax J, Coldham M: Steroid therapy, in Cryiax J (ed): Textbook of Orthopaedic Medicine, vol 2, Treatment by Manipulation, Massage and Injection. Philadelphia, Baillere Tindall, 1984, pp 51–53.

14. Stanish WD, Curwin S, Rubinovich M: Tendinitis: the analysis and treatment for running, in Drez D Jr (ed): Clinics in Sports Medicine, Symposium on Running. Philadelphia, WB Saunders Co, 1985, pp 593–609.

ACKNOWLEDGMENTS

Supported by the Department of Pediatrics, The University of Texas Medical Branch at Galveston, and a grant RR73 from the Clinical Research Center Program of the Division of Research Resources, National Institutes of Health, Public Health Service.

"This year celebrate with Christmas Seals.®"

It's *Christmas Seals' 80th birthday! So join the celebration by putting Christmas Seals on all your gifts and cards. You'll be saying "Happy Birthday!" to Christmas Seals and at the same time helping the American Lung Association fight all lung diseases. This 80th year is the perfect time to send your friends and family healthy holiday wishes with Christmas Seals from the American Lung Association.

It's a matter of life and breath.®

AMERICAN LUNG ASSOCIATION®
The Christmas Seal People®

*Christmas Seals® is a registered trademark

SAMUEL L. SEAMAN, PhD
PATTY GOODWIN, MS
J. DANIEL, MD
ARGYE HILLIS, PhD

Hirschsprung's disease: a difficult diagnosis

Histories of a small series of patients diagnosed as having Hirschsprung's disease were examined to determine promptness and accuracy of diagnosis as well as success of treatment. Our results suggest that recent advances in surgical "pull-through" procedures and early diagnostic techniques have helped to improve the outcomes in these patients. Specifically, the incidence of enterocolitis was small and there were no deaths reported in the series. Despite the rigorous diagnostic regimen, the disease went unnoticed in some patients for several years (one patient was 25 years old). Diagnosis may be particularly difficult in some mild cases of the disease. We therefore encourage primary care physicians to consider Hirschsprung's disease as a possible cause of intestinal obstruction at any age.

A congenital abnormality marked by the absence of parasympathetic ganglion cells in the distal intestine was first described by Harald Hirschsprung in 1887. The abnormality results when ganglion cells of the embryo fail to migrate from the neural crest to the upper alimentary tract and finally to the colon. The migration generally is complete by the 12th week of fetal life (1). The aganglionic, aperistaltic bowel segment effectively prevents the propulsion of the fecal stream, a common result being dilation and hypertrophy of the normal, proximal colon (2).

The length of the affected segment can be small, typically the rectum and/or rectosigmoid, but may include a significant portion of the colon and perhaps the small intestine (2). Hirschsprung's disease occurs infrequently, affecting approximately one in 5,000 births. Incidence in male newborns is four times greater than that in female newborns (3).

Prognosis prior to 1948 was poor; enterocolitis was a common, fatal result. Since then, surgical techniques suggested by Swenson and Bill (4), Duhamel (5), and Soave (6) have improved the outcome dramatically. Better diagnostic procedures and emphasis on early diagnosis have likewise contributed to decreased mortality among individuals with Hirschsprung's disease. In a survey of the surgical section of the American Academy of Pediatrics, Kleinhaus et al (3) noted a decrease in mean age at diagnosis from 45 months prior to 1955 to six months after 1971. In the same survey, the authors suggest that a reduction in mortality due to enterocolitis will be realized only if diagnosis is established during the newborn period. Gore, Oldham, and Lobe (7) echo that sentiment with emotion, pleading for prompt diagnosis in the newborn period and concluding that only rarely can the diagnosis not be reached in the first months of life.

To assess the general applicability of the recommendations in these reports, we reviewed the medical records of a small series of patients with Hirschsprung's disease, noting age at diagnosis, presenting symptoms, method of diagnosis, and treatment regimen.

Results

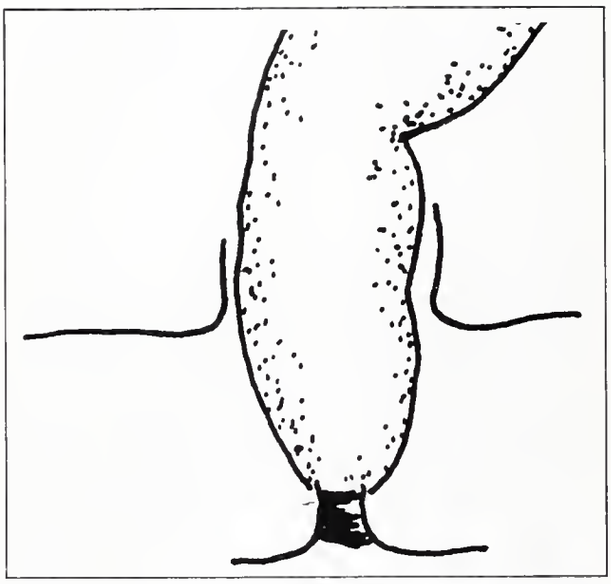
Twenty-five patients referred to the Scott and White Clinic during the years 1972 to 1985 were suspected of having Hirschsprung's disease. The disease was confirmed in 11 of those patients (seven male and four female). Two (18%) were diagnosed during the neonatal period (0-28 days), four (36%) during infancy (four weeks to less than two years), and five (45%) between the ages of 2 and 25 years.

The most common presenting symptom, constipation, was present in ten patients (91%). Other symptoms were abdominal distention (n=8, 73%), vomiting (n=4, 36%), diarrhea (n=4, 36%), and meconium plug syndrome (n=1, 9%). Two patients (18%) were treated for or previously had been treated for enterocolitis.

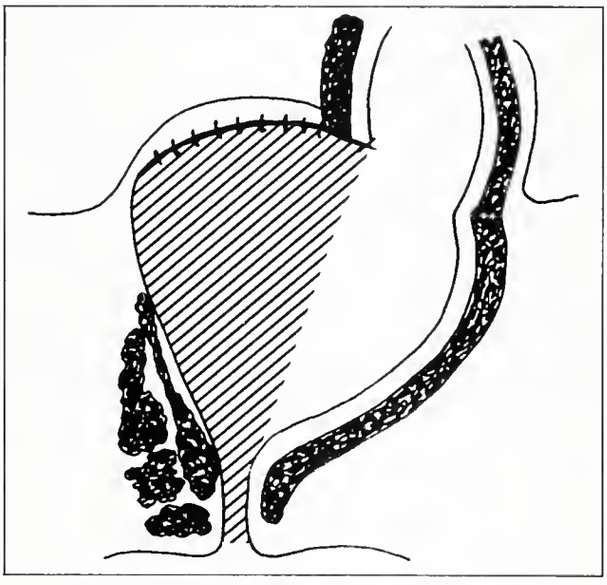
To confirm the disease, several diagnostic procedures were used independently or in conjunction with other procedures. Full thickness rectal biopsy and barium enema were used in seven diagnoses (64%); anorectal manometry was used in two diagnoses (18%); suction rectal biopsy was accurate in three of four cases.

Surgery was the treatment of choice, with Duhamel's procedure (5) chosen in six of eight cases. Swenson's procedure (4) was used once, as was the transanal myectomy. While the method suggested by Soave was not used in our series, it is a similar operation used in the treatment of Hirschsprung's disease (6). These surgical procedures involve resection of the abnormal bowel section. The Swenson operation requires resection of the aganglionic bowel with essentially a normal bowel-to-anus anastomosis. Some aganglionic tissue may be left anteriorly as a cuff (Fig 1). The Duhamel procedure, which has become quite popular, leaves an aganglionic section of rectum to which ganglionic bowel is sutured. This preserves a portion of the dysmotile rectum but provides adjacent normal bowel wall for motility (Fig 2). The Soave operation is an endorectal pull-through in which the rectal mucosa is stripped but the rectal wall preserved. The uninvolved ganglionic bowel is then interposed into the aganglionic sleeve (Fig 3). Modifications of the Swenson operation and the Duhamel and Soave procedures are designed to give some resistance to fecal flow so that fecal continence can be maintained. One patient in the series, carefully observed for several years without surgery, had only mild and infrequent symptoms. Two other patients were lost to follow-up, and information about treatment in

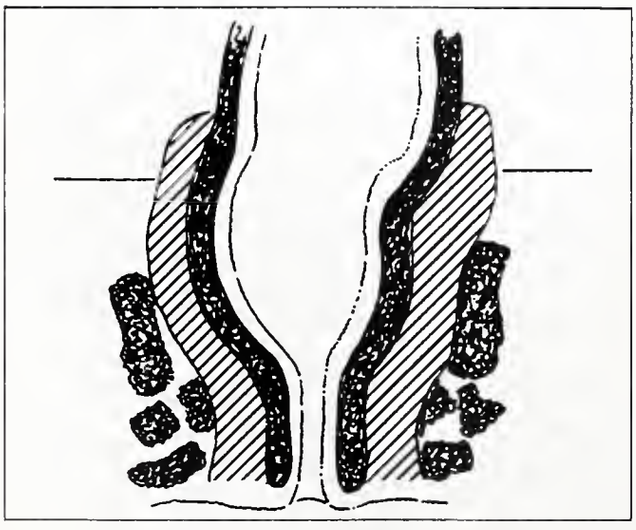
Samuel L. Seaman, PhD; Patty Goodwin, MS; and Argye Hillis, PhD, Department of Biostatistics, Division of Research and Education; J. Daniel, MD, Department of Pediatrics; Scott and White Memorial Hospital, 2401 S. 31st St, Temple, TX 76508. Send reprint requests to Dr Seaman.



1. The Swenson operation. Adapted from Pediatric Surgery, *Holder & Ashcraft, WB Saunders, 1980.*



2. The Duhamel procedure. Adapted from Pediatric Surgery, *Holder & Ashcraft, WB Saunders, 1980.*



3. The Soave operation. Adapted from Pediatric Surgery, *Holder & Ashcraft, WB Saunders, 1980.*

these cases was incomplete. There were no deaths reported in the series.

Discussion

Although the above results were obtained from the review of a small series of patients, they tend to parallel the findings of a similar study by Gore et al (7). In both series, the most common presentation was constipation, and the surgical procedure of choice was the pull-through procedure suggested by Duhamel (5). Despite an aggressive diagnostic regimen, a number of patients were diagnosed at greater than two years of age in both series. These results differ from other series (9,10) where diagnosis was achieved for all patients before two years of age. While we are not able to explain exactly these differences in mean age at diagnosis, Rich et al (11) note that, in some cases, presenting symptoms of Hirschsprung's disease (constipation, abdominal distention, vomiting, and diarrhea) are not always remarkable, making diagnosis difficult at best. Further, milder forms of the disease may be treated by nonprofessionals and only after extended periods of discomfort will the patient present to a physician. Doig (12) notes that the dangers of a missed diagnosis are twofold: "There is the ever present possibility of super-added enterocolitis with death or permanent mucosal change, or, because of the grossly dilated bowel, whatever definitive operation is performed the chances of a good result are much reduced." Diagnosis in the first months of life is unquestionably encouraged. The present results, however, suggest that diagnosis is not always possible in the neonatal or infant periods. Health care professionals are encouraged to consider Hirschsprung's disease as a possible cause of intestinal obstruction at any age, so that aggressive treatment can be initiated and the threat of serious complication removed.

REFERENCES

1. Okamoto E, Ueda T: Embryogenesis of intramural ganglia of the gut and its relation to Hirschsprung's disease. J Pediatr Surg 2:437–443, 1967.

2. Martin LW: Hirschsprung's disease, in Holder TM, Ashcraft KW (eds): Pediatric Surgery, ch 30. Philadelphia, WB Saunders Co, 1980, pp 389–400.

3. Kleinhaus S, Boley SJ, Sheran M, et al: Hirschsprung's disease—a survey of the members of the Surgical Section of the American Academy of Pediatrics. J Pediatr Surg 14(5):588–597, 1979.

4. Swenson O, Bill AH Jr: Resection of rectum and rectosigmoid with preservation of the sphincter for benign spastic lesions producing megacolon: an experimental study. Surgery 24:212–220, 1948.

5. Duhamel B: A new operation for the treatment of Hirschsprung's disease. Arch Dis Child 35:38–39, 1960.

6. Soave F: A new surgical technique for treatment of Hirschsprung's disease. Surgery 56:1007–1014, 1964.

7. Gore D, Oldham KT, Lobe TE: Hirschsprung's dis-

ease in Texas: a plea for early diagnosis. Tex Med 82(2):21–23, 1986.

8. Swenson O, Sherman JO, Fisher JH, et al: The treatment and postoperative complications of congenital megacolon: a 25 year followup. Ann Surg 182(3):266–273, 1975.

9. Klein MD, Coran AG, Wesley JR, et al: Hirschsprung's disease in the newborn. J Pediatr Surg 19(4):370–374, 1984.

10. Kosloske AM, Goldthorn JF: Early diagnosis and treatment of Hirschsprung's disease in New Mexico. Surg Gynecol Obstet 158(3):233–237, 1984.

11. Rich AJ, Lennard TW, Wilsdon JB: Hirschsprung's disease as a cause of chronic constipation in the elderly. Br Med J (Clin Res) 287(6407):1777–1778, 1983.

12. Doig CM: Childhood constipation and late-presenting Hirschsprung's disease. JR Soc Med 77(Suppl 3):3–5, 1984.

For additional resources on this topic, see the MORE ON THE SUBJECTS department in this issue.

Starlite Village Hospital

. . . dedicated to the physical, mental and spiritual treatment of men and women suffering from substance abuse . . .

Located in the Texas Hill Country Near Kerrville

SUBSTANCE ABUSE/PSYCHIATRIC GENERAL MEDICAL

Detoxification • Rehabilitation • Family Program
Aftercare • Psychological Testing
AA Oriented Program

Admissions 24 Hours a Day

JCAH Accredited
Approved by Medicare, Champus, Blue Cross

F. E. SEALE, M.D., MEDICAL DIRECTOR

STARLITE VILLAGE HOSPITAL
Elm Pass Road — Center Point, Texas 78010 — (512) 634-2212
1-800-292-0148 - Texas

GENERAL INTERNIST

The Scott & White Clinic, a multi-specialty clinic of 350 physicians, seeks a general internist to join its growing 12-physician staff in its Taylor facility. The Taylor community has a population of 11,000, located north of Austin. Medical school affiliation available. Excellent educational and cultural opportunities. Competitive income and excellent benefits. Send CV to:

Mr. E. Smith
Department of
Internal Medicine
Scott & White
2401 South 31st Street
Temple, TX 76508

or for more information, please call
817/774-2580.

S&W SCOTT & WHITE

PATRICK C. KELLY, DO, MAJ, MC

MICHAEL R. WEIR, MD, COL, MC

RONALD G. FEARNOW, MD, COL, MC

Pediatricians' views: "latchkey" children, corporal punishment

MAJ Patrick C. Kelly, DO, MC, Exceptional Family Member Department, 97th USAGH, Frankfurt, West Germany; COL Michael R. Weir, MD, MC, Department of Clinical Investigation; COL Ronald G. Fearnow, MD, MC, Department of Pediatrics, William Beaumont Army Medical Center, El Paso, TX 79920–5001. Send reprint requests to Dr Weir, Department of Pediatrics, Madigan Army Medical Center, Tacoma WA 98431.

We mailed questionnaires to more than 1,400 Texas pediatricians to learn their opinions of corporal punishment in schools and to determine what they considered appropriate ages of children left at home alone or given responsibility for babysitting younger children. The 797 responses revealed a surprising diversity of opinions on both issues, some in opposition to the stated opinion of a series of professional organizations, including the American Academy of Pediatrics. We believe there is at least as much diversity of opinion in this segment as among more general segments of the population.

Two topics—"latchkey" children and corporal punishment in schools—have provoked a variety of responses by physicians, parents, and others. Latchkey children are youngsters left alone while their parents work. Kelly et al sampled a group of parents, military police, and local pediatricians and found general agreement with average age guidelines for latchkey children (1). Corporal punishment has a long history of use in schools, but studies have uniformly failed to demonstrate a benefit. Opposition is the official position of a series of professional organizations including the American Academy of Pediatrics (2-5). Kelly et al found a sample of military parents to have general opposition, but a segment of the sample expressed support for a role for corporal punishment (6).

To broaden the sample of professional responses to both issues, we sent a questionnaire to all Texas pediatricians listed in the American Academy of Pediatrics (AAP) fellowship directory (7).

Methods

Following approval by the institutional review board, a one-page questionnaire with a cover letter was sent to all pediatricians listed in the Texas section of the fellowship directory of the AAP, along with a self-addressed, stamped envelope. The questions were:

At what age to you feel that a child may be left alone at home for short periods of time (less than 15 minutes)?

At what age do you feel that a child may be left alone at home for longer periods of time (greater than one hour)?

At what age do you feel that a child may be allowed to babysit younger children?

What is your position on corporal punishment (paddling) in schools?

Do you feel that corporal punishment in schools could improve a child's behavior?

Do you feel that corporal punishment in schools could improve a child's academic performance?

Additional comments—

For statistical analysis, correlations and one-way ANOVA were used with $P < 0.01$ chosen as significant.

Results

There were 797 responses, representing 54% of inquiries. The responses to the "latchkey" issue questions are portrayed graphically (Figs 1–3). When the age answers were given as a range, the mean was used for analysis. The responses showed an expectation for younger children to supervise themselves for shorter periods than older children, with babysitters older yet. There was also an even number preference for the two questions related to remaining alone, though not for babysitting. Age alone for a short time correlated with age alone for a long time ($R = 0.74$). Age alone for a long time correlated with age to babysit ($R = 0.51$). The correlation for age to babysit and age alone for a short time was significant as well ($R = 0.32$). All P values were less than 0.000005.

Responses to the corporal punishment questions are shown in Figs 4 and 5. There was unexpectedly strong support for corporal punishment in schools, but few respondents expressed belief that corporal punishment would improve behavior or academic performance. The respondents who believed behavior would improve with corporal punishment frequently disagreed with its use, as did the respondents who did not believe it improved behavior. Respondents who believed academic performance would be improved with corporal punishment agreed with the use of corporal punishment, whereas those who believed it would not improve academic performance opposed the practice. Respondents who did not know whether corporal punishment would improve either behavior or academic performance tended to agree with its use. There was no relationship between opinion concerning corporal punishment and ages to remain alone or to babysit.

Comments from respondents

The questionnaire's request for comments revealed insight into the apparent contradictions in other answers and observations on the questionnaire itself. We were cautioned not to oversimplify the results or to make blanket recommendations or condemnations of certain activities. We were congratulated and chastised for our efforts and for the instrument.

LATCHKEY

The "latchkey" questions prompted conditional responses, indicating that there are developmental prerequisites for being unsupervised or for babysitting. The ages cited were merely guidelines that could be lowered for mature children or raised for immature ones. The concern for sexual abuse by

babysitters, particularly male sitters, was a recurring theme.

For latchkey children, perceived risks were thought to vary with age groups and to depend on maturity, personality, responsibility, safety of the home and neighborhood, emotional stability of the children, and accessibility of adults. Some respondents stated that for remaining alone, nonambulatory infants are at less risk than are toddlers. Also, preadolescents are safer alone and as babysitters than are some teenagers, who might take risks, use or abuse drugs, or attempt sexual exploration. Adolescent males were felt to be not only more immature than females, but more physically and sexually aggressive. Adolescent males were also thought to have more learning disabilities and to display more antisocial behavior. Individual maturity and responsibility were offered as more important determinants of the ability to be unsupervised or babysit than were group ages.

CORPORAL PUNISHMENT

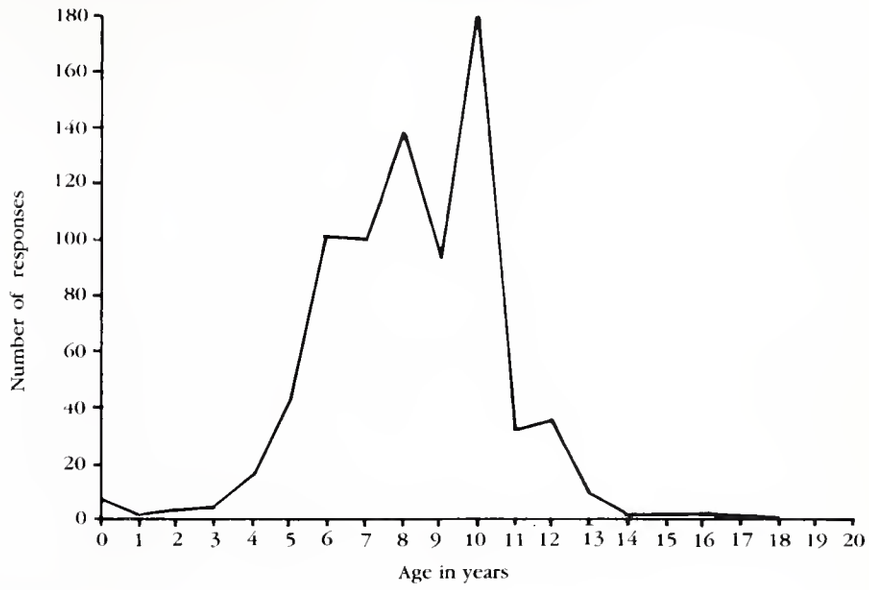
We were surprised at the support for corporal punishment, particularly when it coincided with the belief that corporal punishment does not improve behavior or academic performance. There was strong support for the need for classroom discipline. There was repeated expression that the absence of the threat of corporal punishment has resulted in chaos in classrooms and that certain age groups (early school years) respond positively to the threat and use of corporal punishment. Opposition to corporal punishment in the schools was based on the potential for teaching violent physical solutions to problems and was cited as frequently reinforcing the very behavior it is intended to diminish. Some respondents noted that corporal punishment has been used as an inappropriate expression of frustration with children who are "hyperactive" or who have learning disabilities. Some of the responding pediatricians observed that corporal punishment reflected the personal and professional inadequacy of the teacher. Opponents of corporal punishment pointed out that children have suffered physical and emotional injury, that the student and teacher have been placed in an adversarial relationship, and that the practice has never been shown to be effective.

The arguments in favor of corporal punishment focused on a need for discipline and on classroom chaos resulting from the withdrawal of such punishment. Corporal punishment was advocated as a solution in several instances: (a) when the child's behavior could harm the child or another, (b) as a last resort, (c) for repeated offenses, (d) with guidelines for offenses and its administration.

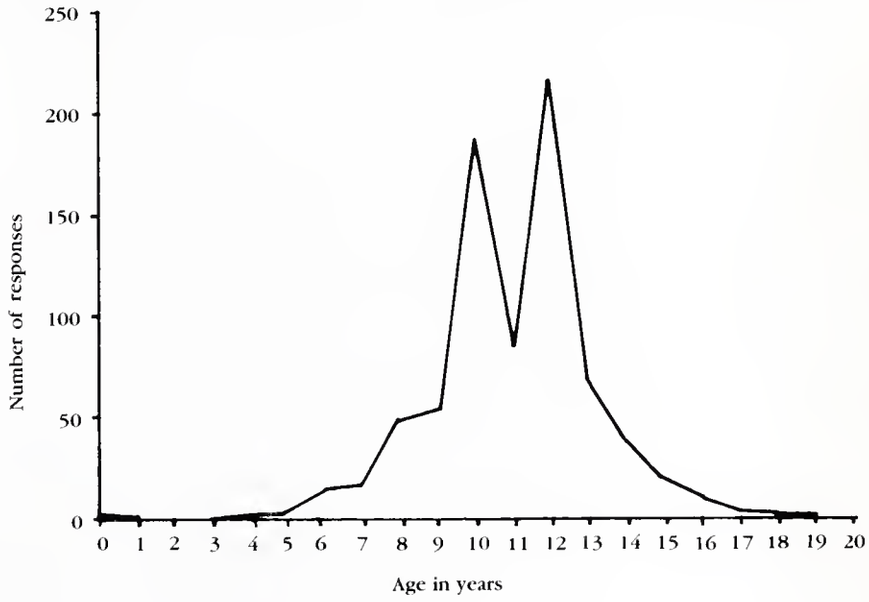
Discussion

The issues of latchkey and corporal punishment in

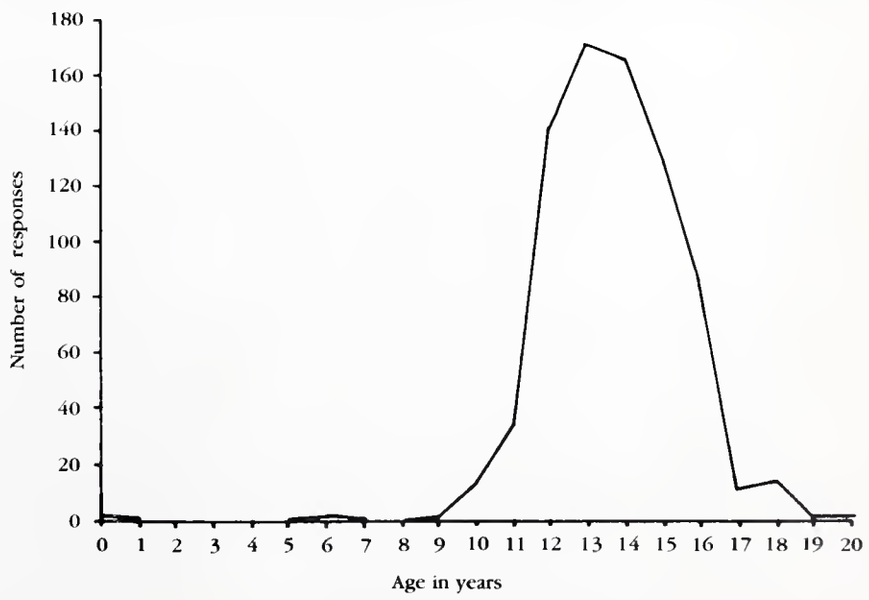
1. Age at which Texas pediatricians believe a child could be left alone for a short period.



2. Age at which Texas pediatricians believe a child could be left alone for a long period.



3. Age at which Texas pediatricians believe a child may be allowed to babysit younger children.



4. Percentage of responses (n=797) to the question, "What is your position on corporal punishment (paddling) in schools?"

Strongly agree	43%
Agree	8%
No opinion	1%
Disagree	25%
Strongly disagree	13%

5. Percentage of responses to the questions, "Do you feel that corporal punishment in schools could improve a child's behavior . . . academic performance?"

	Behavior	Academic Performance
Agree	7%	9%
Disagree	52%	75%
Don't know	41%	16%

schools are complex and were not explored in our survey. Therefore, recommendations based on our survey are inappropriate and, in fact, were never planned. "Latchkey" issues involve social isolation and safety as well as the obvious economic realities of modern society. Practice should be and probably is related more to the individual elements of maturation, responsibility, and family resources than to specific age guidelines. Responses in our survey were in agreement with previously published surveys (1).

Issues in corporal punishment involve (a) discipline both at home and at school; (b) impact of failure to maintain discipline on learning; (c) abuse of disciplinary techniques and of children; and (d) the relationships of students', teachers', and parents' rights, responsibilities, authority, and challenges to authority.

Among pediatricians that responded, there is strong support for corporal punishment with well defined controls. There is concern for discipline in schools and a belief that failure to maintain discipline detracts from learning. Confounding concerns include the motives of school authorities, their insecurity or lack of alternative skills, and the inappropriate use of corporal punishment of children with "hyperactivity" or behavioral problems that relate to learning disabilities.

We suspect that the polarity of this pediatrician sample regarding corporal punishment is representative of society in general. There appear to be two positions that are mutually exclusive, with advocates who maintain that corporal punishment is necessary to ensure discipline, and opponents who believe corporal punishment has no place in modern schools. One group appears to support the individual rights, and the other supports the concept that other students and teachers have the right to a disciplined environment in which learning is possible. The position for or against corporal punishment may be based on the right the respondent recognizes or perceives as the most important. The advocate of corporal punishment apparently feels that loss of discipline is a violation of the rights of all students and teachers, and that physical discipline is a necessary element in ensuring that this does not occur. The opponent of the practice may feel that the rights of the individual child are of a higher order. The opponent does not recognize or rejects a need for corporal punishment to ensure the group rights.

Opposition to the practice of corporal punishment in schools by major professional groups of knowledgeable and at times outspoken individuals remains problematic. We presume that group versus individual rights were considered in the position of many such organizations, including the American Academy of Pediatrics. Many of the individuals comprising these organizations, at least in Texas, do not agree with these opinions. The question is clearly important, but based on our survey is unlikely to be answered by a consensus of commonly recognized experts.

REFERENCES

1. Kelly PC, Weir MR, Atkinson AW, et al: "Latchkey": Three voices with one message. Clin Pediatr 25(9): 462–465, 1986.

2. Corporal Punishment in Schools. American Academy of Pediatrics Committee on School Health. Pediatrics 73(2):258, 1984.

3. The Last? Resort. Newsletter of the Committee to End Violence Against the Next Generation, Inc 9:6, 1980.

4. Corporal punishment of children in schools and institutions. Policy Statements Adopted by the Governing Council of the American Public Health Association, Nov 7, 1979. Am J Public Health 70(3):308, 1980.

5. Policy statement of the American Psychological Association. Am Psychol 30:632, 1975.

6. Kelly PC, Weir MR, Fearnow RG: A survey of parental opinions on corporal punishment in schools. J Dev Behav Pediatr 6(3):143–145, 1985.

7. 1985 Fellowship List, American Academy of Pediatrics, Sept 1985.

ACKNOWLEDGMENTS

Mrs Kay Lamb contributed in preparation and distribution of questionnaires, Mrs Sue Lamonde contributed with questionnaire collection, analysis, and manuscript preparation.

The TMA Memorial Library staff compiled this bibliography for several of the major topics covered this month in Texas Medicine. *All of the listed resources are available in the library. For information, call the Memorial Library at (512) 477–6704. TMA members also may request research on any medical topic. Books, audiovisuals, and copies of journal articles are available by calling or writing the library. In most cases, your request can be processed within 24 hours.*

MANAGEMENT OF CHILDREN WITH "NEW MORBIDITY" DISORDERS

Journal Articles

Berg I: Management of school refusal. Arch Dis Child 60 (5):486–488, 1985.

Golder J: Treatment of enuresis. A personal approach in general practice. Aust Fam Physician 15 (11):1413, 1416, 1986.

Maizels M, Rosenbaum D: Successful treatment of nocturnal enuresis: a practical approach. Primary Care 12 (4):621–635, 1985.

McAnanly E: School phobia: the importance of prompt intervention. J Sch Health 56 (10):433–436, 1986.

McDaniel KD: Pharmacologic treatment of psychiatric and neurodevelopmental disorders in children and adolescents (Part 1). Clin Pediatr (Phila) 25 (2):65–71, 1986.

Pedersen PS, Hejl M, Kjoller SS: Desamino-D-arginine vasopressin in childhood nocturnal enuresis. J Urol 133(1):65–66, 1985.

Simeon JG, Ferguson HB: Recent developments in the use of antidepressant and anxiolytic medications. Psychiatr Clin North Am 8(4):893–907, 1985.

Young DE, Young RR: Nocturnal enuresis: a review of treatment approaches. Am Fam Physician 31(3):141–144, 1985.

HIRSCHSPRUNG'S DISEASE: A DIFFICULT DIAGNOSIS

Journal Articles

Blisard KS, Kleinman R: Hirschsprung's disease: a clinical and pathologic overview. Hum Pathol 17(12):1189–1191, 1986.

Cass D: Hirschsprung's disease: an historical review. Prog Pediatr Surg 20:199–214, 1986.

Harrison MW, Deitz DM, Campbell JR, et al: Diagnosis and management of Hirschsprung's disease. A 25 year perspective. Am J Surg 152(1):49–56, 1986.

Martin LW, Torres AM: Hirschsprung's disease. Surg Clin North Am 65(5):1171–1180, 1985.

Miyano T, Suruga K: New operative technique for Hirschsprung's disease. J Pediatr Surg 20(2):160–163, 1985.

Nixon HH: Hirschsprung's disease: progress in management and diagnostics. World J Surg 9(2):189–202, 1985.

Perkins M, Gleason W, Andrassy RJ: Diagnosis and management of constipation and encopresis in childhood. Tex Med 81(1): 40–42, 1985.

Starling JR, Croom RD 3d, Thomas CG Jr: Hirschsprung's disease in young adults. Am J Surg 151(1):104–109, 1986.

Books

Hirschsprung's disease, in Misiewicz JJ, Pounder RE, Venables CW (eds): Diseases of the Gut and Pancreas. Boston, Blackwell Scientific Publications, 1987, pp 916–922.

Raffensperger JG: Hirschsprung's disease, in Berk JE (ed): Bockus Gastroenterology, ed 4. Philadelphia, WB Saunders, 1985, vol 4, pp 2417–2424.

Sieber WK: Hirschsprung's disease, in Welch KJ, Randolph JG, Ravitch MM, et al (eds): Pediatric Surgery, Chicago, Year Book, 1986, vol 2, pp 995–1017.

ALL-TERRAIN VEHICLE ACCIDENTS: MECHANISMS AND PREVENTION

Journal Articles

Haynes CD, Stroud SD, Thompson CE: The three wheeler (adult tricycle): an unstable, dangerous machine. J Trauma 26(7):643–648, 1986.

Kriel RL, Sheehan M, Krach LE, et al: Pediatric head injury resulting from all-terrain vehicle accidents. Pediatrics 78(5): 933–935, 1986.

Sewell CM, Pine JS, Hull HF: Injuries and fatalities associated with off-road three-wheeled all-terrain vehicles. West J Med 146(4):497–498, 1987.

Shallman RW, Aldrich RE, Kelman DB, et al: Three- and four-wheeled, all-terrain vehicle injuries: one year's experience in a large, rural, medical center. Wis Med J 85(8):15–17, 1986.

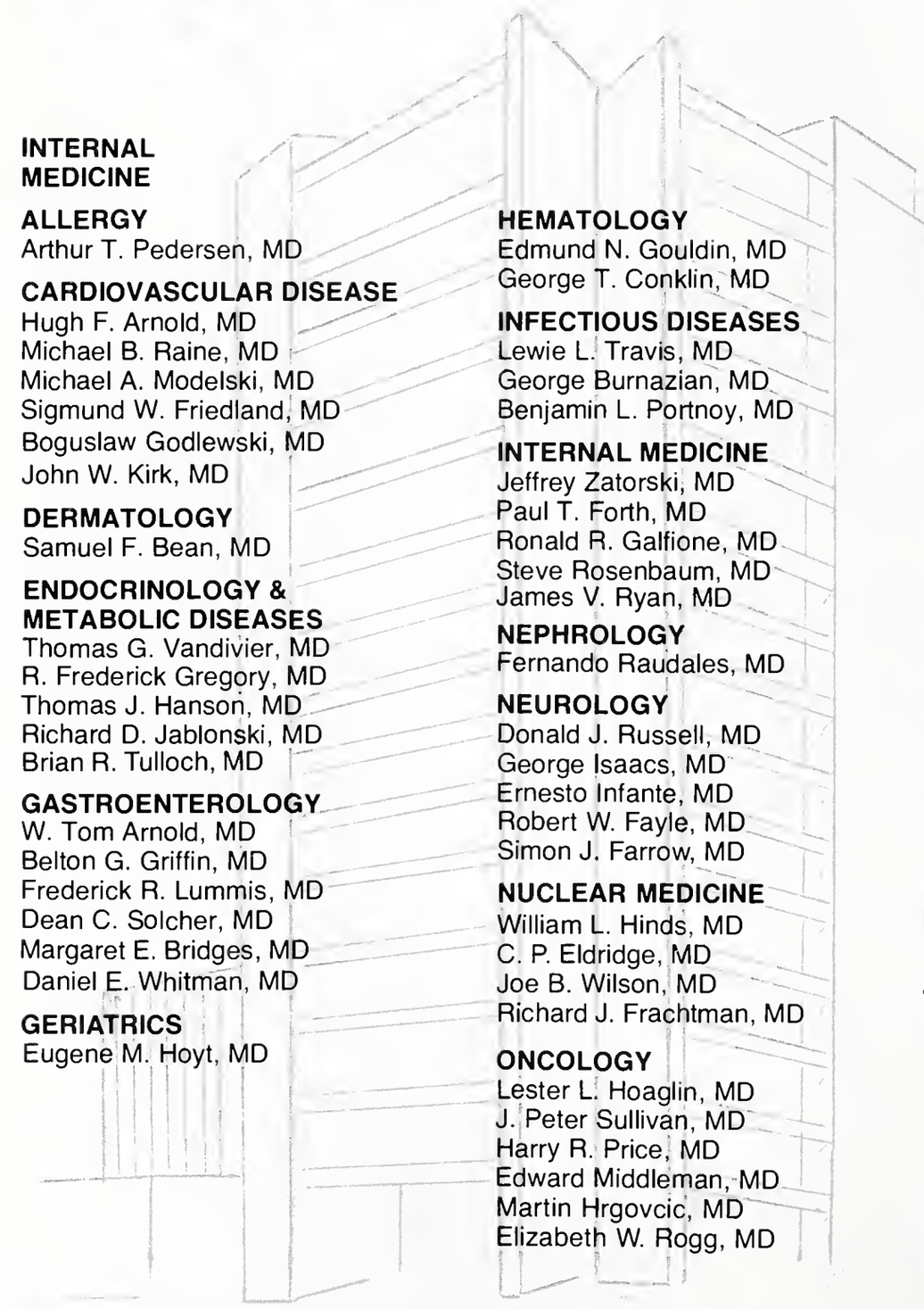
Trager GW, Grayman G, Harr S: All-terrain vehicle accidents: the experience of one hospital located near a major recreational area. Ann Emerg Med 15(11):1293–1296, 1986.

DIAGNOSTIC CLINIC OF HOUSTON

6448 FANNIN
HOUSTON, TEXAS 77030
(713) 797-9191

TEXAS MEDICAL CENTER

DCH



INTERNAL MEDICINE

ALLERGY
Arthur T. Pedersen, MD

CARDIOVASCULAR DISEASE
Hugh F. Arnold, MD
Michael B. Raine, MD
Michael A. Modelski, MD
Sigmund W. Friedland, MD
Boguslaw Godlewski, MD
John W. Kirk, MD

DERMATOLOGY
Samuel F. Bean, MD

ENDOCRINOLOGY & METABOLIC DISEASES
Thomas G. Vandivier, MD
R. Frederick Gregory, MD
Thomas J. Hanson, MD
Richard D. Jablonski, MD
Brian R. Tulloch, MD

GASTROENTEROLOGY
W. Tom Arnold, MD
Belton G. Griffin, MD
Frederick R. Lummis, MD
Dean C. Solcher, MD
Margaret E. Bridges, MD
Daniel E. Whitman, MD

GERIATRICS
Eugene M. Hoyt, MD

HEMATOLOGY
Edmund N. Gouldin, MD
George T. Conklin, MD

INFECTIOUS DISEASES
Lewie L. Travis, MD
George Burnazian, MD
Benjamin L. Portnoy, MD

INTERNAL MEDICINE
Jeffrey Zatorski, MD
Paul T. Forth, MD
Ronald R. Galfione, MD
Steve Rosenbaum, MD
James V. Ryan, MD

NEPHROLOGY
Fernando Raudales, MD

NEUROLOGY
Donald J. Russell, MD
George Isaacs, MD
Ernesto Infante, MD
Robert W. Fayle, MD
Simon J. Farrow, MD

NUCLEAR MEDICINE
William L. Hinds, MD
C. P. Eldridge, MD
Joe B. Wilson, MD
Richard J. Frachtman, MD

ONCOLOGY
Lester L. Hoaglin, MD
J. Peter Sullivan, MD
Harry R. Price, MD
Edward Middleman, MD
Martin Hrgovcic, MD
Elizabeth W. Rogg, MD

PATHOLOGY
Paul B. Radelat, MD
Ashok M. Balsaver, MD

PULMONARY DISEASE
Joel E. Reed, MD
Gene R. Lindley, MD
Martin L. Kaplan, MD
Nelson A. Fernandez, MD

RADIOLOGY
William L. Hinds, MD
C. P. Eldridge, MD
David D. Lawrence, MD
Charles A. Spain, MD
Joe B. Wilson, MD
Howard J. Pollock, MD
Jeffrey A. Klein, MD
Richard J. Frachtman, MD

RHEUMATOLOGY
John E. Norris, MD
Carolyn A. Smith, MD
John J. Zieminski, MD

ADMINISTRATION
Robert B. Hall,
Administrator
Joan R. McClung,
Associate Administrator

Information for **A***uthors*

Texas Medicine has two purposes: As a continuing education vehicle for physicians, it publishes clinically useful scientific articles and other technical information. As the official publication of the Texas Medical Association, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd, Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an Editorial Committee, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Copyright assignment
In view of The Copyright Revision Act of 1976, effective Jan 1, 1978, all transmittal letters to the editor must contain the following language: "In consideration of the Texas Medical Association taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the Texas Medical Association in the event that such work is published by the TMA."

We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.

Scientific articles
Manuscripts should by typed double-spaced with ample margins. Three copies, including illustrations, should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief.

Include a mailing address and telephone number for each author.

An introductory summary of 100–150 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 26th edition, and "Webster's Third New International Dictionary, Unabridged."

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Subheadings may be needed to clarify content. Other types of articles may need different formats.

When citing clinical laboratory data, please report in conventional units, followed in parentheses by Systeme International (SI) units.

For more extensive information about preparing medical articles for publication, the editors suggest the following sources:

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine.*

Barclay WR, Southgate MT, Mayo RW: Manual for authors and editors: editorial style and manuscript preparation. Los Altos, Calif, Lange Medical Publications, 1981. Compiled for the American Medical Association.

CBE Style Manual Committee: CBE style manual: a guide for authors, editors, and publishers in the biological sciences. 5th ed, rev and expanded. Bethesda, Md, Council of Biology Editors, Inc, 1983.

In addition, many excellent books and manuals are devoted to principles and techniques of clear, concise writing, which are applicable to scientific as well as general topics.

References
References to scientific publications should be listed in numerical order at the end of the article, with reference numbers placed in parentheses at appropriate points in text.

Minimum acceptable data:

Journals: Authors, article title, journal, volume, inclusive pages, year.

Books: Author, title, place of publication, publisher, year.

Other sources: Enough information must be included so that the information can be identified and retrieved.

Letters, personal communications, and sources not readily available should be excluded from the reference list, but may be mentioned parenthetically or in footnotes.

Illustrations
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet of paper.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously published material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with manuscript.

Editorials
Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the managing editor, Editorial Committee, and Board of Publication.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd, Austin 78701.

Obituaries
Brief obituaries of deceased TMA members are published if adequate information is received within one month of date of death. With notification, please include the name and address of next of kin.

Policy on columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Editorial Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the managing editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine.*

Point of view
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Clinical abstracts are selected from current reviews in 100 internationally recognized journals received by the TMA Memorial Library each month.

Mendelian etiologies of stroke. Marvin Natowicz, MD, PhD, and Richard I. Kelley, MD, PhD. Little, Brown and Company, *Annals of Neurology,* vol 22, 1987, pp 175–192.

There are many genetic disorders associated with an increased risk for stroke that may easily be overlooked in the evaluation of both adult and pediatric acute stroke victims. The recognition of a genetic disorder as the cause of a stroke has important implications not only for the immediate care of the stroke victim, but often also for others in the patient's family who may be at risk for the same disease and for whom preventive measures sometimes can be taken. The authors present a comprehensive review of genetic disorders associated with stroke in the nongeriatric age groups for which a causative role in the evolution of stroke has been recognized or is likely. For each disorder, the major clinical and biochemical characteristics as well as the probable pathogenetic mechanisms of stroke are discussed, together with the appropriate testing required to screen for and confirm the diagnosis. The great variety of genetic disorders and mechanisms causing stroke underscores the increasing importance of understanding genetic disease for appropriate diagnosis and treatment of a common clinical problem affecting both children and adults.

Angiostatic steroids. Method of discovery and mechanisms of action. Judah Folkman, MD, and Donald E. Ingber, MD, PhD. J.B. Lippincott Company, *Annals of Surgery,* vol 206, no 3, Sept 1987, pp 374–383.

A new class of steroids has been found that inhibits angiogenesis in the presence of nonanticoagulant heparin. Tetrahydrocortisol is the most potent of the naturally occurring angiostatic steroids. It is a metabolite of cortisone that circulates in the blood, appears in the urine, and was previously believed to be biologically inactive. Both the plasma form and the urinary form are antiangiogenic. The mechanism of action of these steroids depends on their ability to specifically alter basement membrane turnover in growing capillary blood vessels. These steroids represent a prototype of angiogenesis inhibitors that may find potential therapeutic use as adjunets to antieancer therapy, and in diseases dominated by abnormal neovascularization, i.e., angiogenesis-dependent diseases.

Nosocomial transmission of hepatitis A in an adult population. Ramona Baptiste, BS, RN; Deloris Koziol, MPH, MT (ASCP); and David K. Henderson, MD. SLACK Incorporated, *Infection Control,* vol 8, no 9, 1987, pp 364–370.

Nosocomial transmission of hepatitis A from patients to staff members is an unusual event. Recently several cases of occupational transmission of hepatitis A to health eare workers have been reported in the literature. Most of these have occurred as a result of transmission from an infected child to a staff member involved in his or her care. The authors report an additional case of transmission of hepatitis A from an infected adult to a staff member, and review the literature regarding nosocomial hepatitis A transmission. The review emphasizes several points that nearly all instances of nosocomial transmission of hepatitis A have in common, including the role of asymptomatic infection, the timing of hospitalization, and the fact that index patients often have an underlying illness that obscures the early diagnosis of hepatitis A. In addition, several other areas of controversy with respect to hepatitis A are discussed.

Surgical treatment for advanced epithelial carcinoma of the ovary. Uziel Beller, MD; E. Mark Beckman, MD, FACS; Franco M. Muggia, MD; et al. The American College of Surgeons, *Surgery, Gynecology & Obstetrics,* vol 165, no 3, Sept 1987, pp 279–283.

In spite of considerable progress in the understanding of the biologie characteristies of tumors and the application of systemic therapy, carcinoma of the ovary remains the most lethal gynecologic malignant disease. While systemic methods of therapy need to be improved, we need also to carefully evaluate the accumulated data from the surgical point of view. This may result in the emergence of doubts and questions concerning widely accepted philosophies of practice. For the gynecologist involved in the eare of the patient with epithelial carcinoma of the ovary, several important deeision making situations constitute an integral part of the medical practice. Initially, several decisions must be made: staging of the patient, especially young patients or patients with early disease, or the initial cytoreductive operation, considering the risks of extensive surgical proeedures. In the course of the disease, other dilemmas arise when repeated attempts at eytoreductive operation or a second look laparotomy are needed. The first and most important aspect to consider is whether or not survival time is prolonged by any surgical procedure. These issues are discussed and current literature is reviewed.

Survey: localization and operation for nonpalpable testes. Frank Hinman, Jr, MD. Professional Medical Services Company, *Urology,* vol 30, no 3, Sept 1987, pp 193–198.

Testes that lie above the internal inguinal ring pose a special problem for the surgeon, both for their localization (or demonstration of absence) and for their management. Such a testis may be absent or small and dysgenetic, and often is associated with abnormal adnexae. Current practice in the management of intra-abdominal testes was assessed from published reports and from a questionnaire sent to a representative sample of pediatrie urologists in whieh their opinion was requested for management of a two-year-old boy with a nonpalpable testis.

Feature

Recoupment: Fear, confusion, and a court date

When the US Department of Health and Human Services (HHS) instructed the Health Care Financing Administration (HCFA) to change its coding procedures in 1985, Blue Cross and Blue Shield of Texas (BC/BS), the Texas Medicare carrier, based payments to physicians and beneficiaries on fee schedules, rather than physician fee profiles, an option the carrier legally held. BC/BS followed this procedure for nine months, during which time numerous physicians noticed increased payment levels for certain codes. Physicians who informed the carrier of the discrepancy were told that the payment levels were correct. However, in August 1987, HCFA instructed BC/BS to collect, or recoup, what it now calls "overpayments" of $14 million. Physicians received the bill for $11 million of that amount. Physicians and beneficiaries may pay in one payment or installments or have the amount deducted from future Medicare payments (to physicians) or social security payments (to patients).

Medicare's attempt to recoup alleged overpayments has gone beyond a financial issue, generating fear and confusion. The threat of reduced social security payments has caused understandable concern among elderly beneficiaries on a fixed income. Further, the administration has implied in its correspondence that physicians might make illegal efforts to collect money from patients and thus has placed the physician-patient relationship in jeopardy. Letters related to the recoupment have been mailed to 5,000 Texas physicians and more than 200,000 beneficiaries at a cost of almost $300,000 to HCFA. Further, while the courts consider whether the recoupment is justified, those who already have repaid the difference are at risk of losing that money, which at press time exceeded $3 million.

Texas Medical Association has responded on behalf of physicians and patients with legal action against HHS and BC/BS. This article explores the moral and economic issues surrounding the recoupment effort, as well as TMA's response.

The moral question

"Many of my patients thought I had done something wrong."

That statement, contained in an affidavit supporting TMA's lawsuit against the US Department of Health and Human Services and Blue Cross and Blue Shield of Texas, expresses the concern of Robert F. White, MD. Dr White, a general practitioner, is one of three physicians in Mount Vernon, Tex, a rural town in the northeast corner of the state.

Among the beneficiaries Medicare dunned were three of Dr White's patients. Together these patients owe Medicare less than $500, but they felt strongly enough about the issue to join in Texas Medical Association's legal action.

Maggie M. Moore has been Dr White's patient for seven years. "I think he is a perfect gentleman and a good doctor," she says of Dr White. "He's always been at our beck and call. He's just one that we can depend on." Mrs Moore joined TMA as a plaintiff in the lawsuit against HHS because "I don't feel like we made a mistake. I don't feel like it was our fault if there was a mistake even made, which I doubt. I don't feel like I owe them anything, and I don't feel like Dr White owes them anything."

In August 1987, Mrs Moore received a letter from Medicare demanding that she pay $128 within 30 days of the date of the letter or risk having the money withheld from her social security checks. Mrs Moore stated in her deposition, "I immediately sent the letter back with a note that I did not believe that I owed the money. I have received two calls from Medicare since then in which they tried to collect the money from me. On the second call, the man said, 'We're going to get it from you.'"

She added, "No one from Medicare told me about an extension (on the deadline) to pay the money back, which I now understand I was granted. I do not understand why I owe Medicare $128 . . . ."

Although Raymond Conley disagreed with the contention that he owed Medicare $276, he paid the amount because he feared Medicare's bureaucratic maze. Mr Conley is retired from dairy farming and has lived in Saltillo, Tex, all his life. He received a letter from Medicare dated Aug 20, 1987, advising him that the estate of his wife Ovetta owed Medicare for overpayment of Dr White's services in 1985.

"I thought about paying a little out each month," Mr Conley says. "I talked to some people who had done that, and they said that it would take forever to get it straightened out. So, I just made arrangements to send them a check for the whole thing. I'd rather do that and get through with it." Mr Conley has been Dr White's patient for 14 years. The physician treated Mrs Conley for a heart condition and other physical problems, and treats Mr Conley's heart condition. Mr Conley says, "You know, when you go to a doctor that long, you are bound to think a lot of him, or you wouldn't keep going. He's one of the best doctors I know of."

Medicare form letter to the patient when an "overpayment" to the physician on a 100% basis is alleged and no coinsurance was involved.

Dear (beneficiary):

In 1985 Medicare changed to a new coding structure. During this change, some codes were changed incorrectly. This caused claims billed for these services to be overpaid.

Our records show that we overpaid (doctor's name) $(amount) on your behalf. Since this was a 100 percent reimbursement service you do not owe the doctor.

A bill received from the doctor for these services should be sent to us with a copy of this letter.

We always wish to be of service. Thank you for your time and help in this matter.

Sincerely,

Mr Conley says he agreed to participate in legal action against HCFA because he feels that Medicare made a mistake, and he's paying for it. "I'm willing to help any way I can because I don't think we got a fair deal out of it," he says.

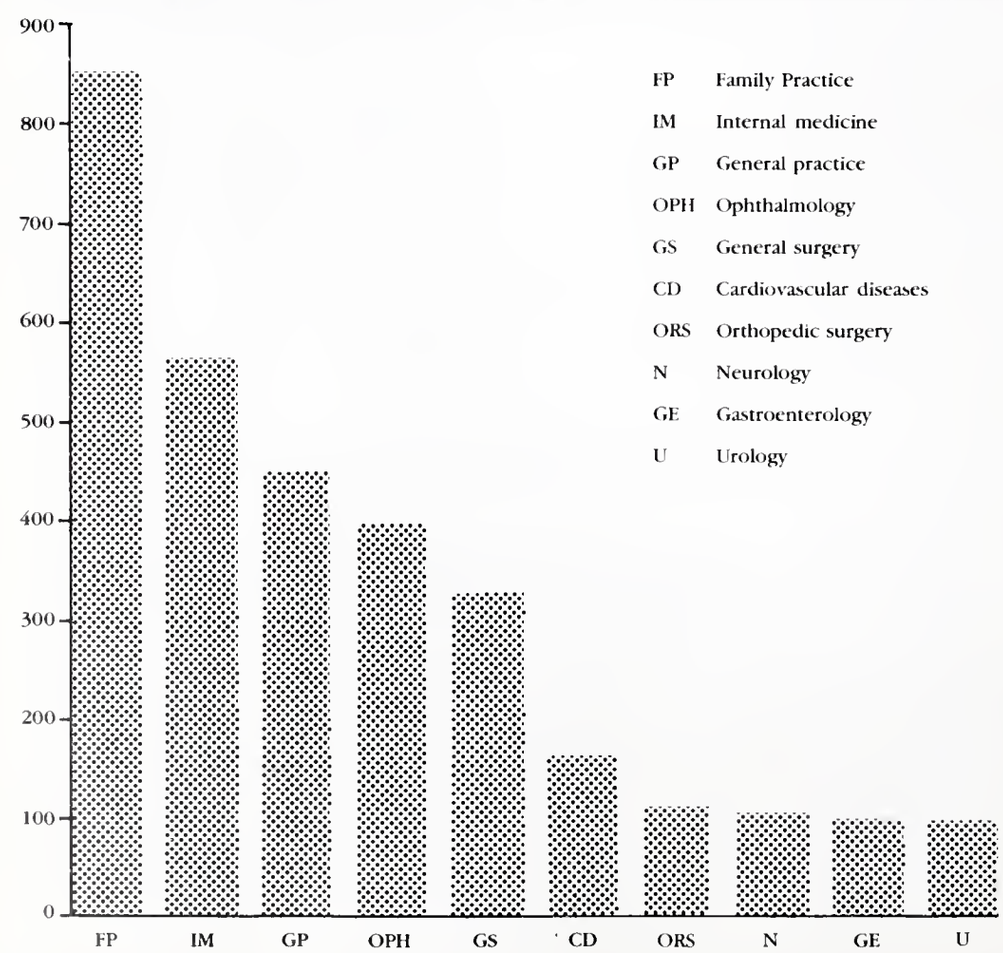
Dr White's patients are not alone in their moral indignation. "In order to deal with the confusion raised by these notices, I sent a special letter to my Medicare-covered patients explaining the effort in understandable terms," one physician wrote TMA. "Needless to say, I was most concerned at the damage being done to the relationship I have with each of my patients. Inasmuch as wrong-doing is implied on the physician's part in these collections letters, these letters irreparably undermine my patients' confidence in me. My ability to treat my patients is harmed unless notices like these are stopped."

Other physicians have written TMA and HCFA expressing similar concerns. "At present I disagree with your receiving a refund," one wrote. "But, if you take the money with my knowledge, then I can accuse you only of inappropriate actions and not thievery." This physician ended his letter with a grim characterization of the recoupment effort. "I know you are just following orders. So were Adolf Eichmann and the SS troops of Nazi Germany . . . . You have abused a revered American word, 'fair,' in using the title 'Fair Hearing Department.'"

Another physician wrote, "Medicare sent this letter implying I would bill the patient in an illegal fashion. This type of communication is not only unnecessary, but it is insulting. They not only make an error, but they then immediately send a letter to my patient stating that if I send a bill (which, of course would violate the participation contract), the patient should report me to the authorities."

A physician who was "overpaid" by $81,000 wrote, "The damage (these letters) have done between my patient population and my office is incalculable. The number one factor for a doctor to get new patients and to retain his old patients is patient confidence and rapport with both the doctor and the doctor's staff . . . . It is impossible to project the impact on my practice from this error, but to a certain extent, this impact is irreversible and has caused me both emotional and financial damage . . . . I feel all the problems have been due to haste and mismanagement by Medicare. Their haste and mismanagement resulted initially in the coding problems and then two years later, their haste in sending out letters to patients has resulted in a wrong letter being sent to my patients. I feel the damage done to my practice and the continuing damage that will be done by word of mouth, will be far in excess of $81,000."

Medicare recoupment effort: number of physicians affected, by medical specialty.



The financial question

Approximately 65% of Dr White's patients are Medicare beneficiaries. Through the recoupment effort, Medicare instructed Dr. White to repay $2,831.84. Dr White explained that low reimbursement levels plus the recoupment have hit him hard. "Our Medicare profiles are considerably lower than in cities and in other areas. We're already on a marginal reimbursement, so we're trying to figure out how to upgrade things. We certainly cannot afford to have funds cut back, and return money."

Additionally, the confusion in the wake of the recoupment has cost Dr White in terms of time, both his own and that of his staff. "A large percentage of my patients are Medicare beneficiaries, and they don't understand any of these things. We have to tell them, explain to them what's happening, how to fill forms out, how to send in papers, or we have to send it in for them."

And, Dr White fears that he has lost patients because of the recoupment's resultant public relations problems. "When patients get this letter, the implication is that I have been a big, bad, mean fellow and done all these things to the poor little federal government, and that patients are having to pay back because the government overpaid me. And, the patients want to know what we've done wrong. Now, there have been a lot of people who didn't say anything. They've

just gone to other doctors. We've had a tremendous amount of explaining to do. And, after we explain it, then the patients get mad about the way the letter is written."

Dr White accepts Medicare's assigned fee for a service when patients are on Medicaid or are in financial difficulty. In a deposition to the US District Court, he said, "In the fall of 1985, my office called Medicare with respect to coding for daily hospital services. We were told that filing for only one visit a day was appropriate, even though we saw and continued to see our patients twice a day. We converted to the daily hospital care code, which we were told would be reimbursed at $30 for each day of services. Now, Medicare says they should have paid $15 for daily hospital care services."

The financial difficulties of the recoupment also affect the social security recipients. Maggie Moore is financially unable to pay the money. "I'm still paying my doctors for their services last fall when I had a bad wreck," she explains.

The answers

The Health Care Financing Administration first notified the Texas Medical Association of the recoupment effort Aug 6, 1987. Shortly thereafter the association met with HCFA and Blue Cross and Blue Shield officials, as well as representatives of the Texas Ophthalmological Association and the American Association of Retired Persons-Texas Chapter (AARP). By Aug 26, following discussions between the Washington offices of the AMA and HCFA, a 30-day extension on the recoupment was granted for physicians and patients, extending the deadline to Oct 18.

During September, TMA again met with HCFA and the carrier to review data, computations, and methods used in determining the alleged overpayment. TMA representatives also held a briefing session with the Texas Congressional staff. Members of the Texas Congressional delegation who sit on the House Ways and Means Committee met with HCFA and carrier officials. Concurrently, TMA President David Vanderpool, MD, sent a letter to William L. Roper, MD, HCFA administrator, requesting an immediate halt to the recoupment effort.

In October, TMA and TOA representatives met in Washington with the Texas Congressional delegation. Subsequently, all 27 Texas congressmen and the state's two senators wrote HHS Secretary Otis R. Bowen, MD, requesting that the recoupment effort be suspended for 60 days to allow time to review the facts and resolve questions. The letter asked Secretary Bowen to respond by Thursday, Oct 15. Association activities culminated with the announcement of a lawsuit Friday, Oct 16, after the secretary failed to respond. (The lawsuit is described in this month's Medicine and the Law column beginning on p 51.) On Thursday, Oct 29, a federal district court judge granted a preliminary injunction that halts the recoupment until a full hearing on the merits of the case is conducted and a decision reached.

HCFA Region VI Administrator Jerry Sconce, Dallas, insists that the recoupment effort is a routine and legal procedure, albeit on a larger scale. "To put this in perspective," he says, "we pay out about $80 billion a year for Medicare in the United States, and in 1986, we made overpayments of $2.5 billion. On any one day, nationally, we have between $200 million and $300 million outstanding in overpayments that we are collecting."

The recoupment effort now underway in Texas seeks to collect approximately $14 million.

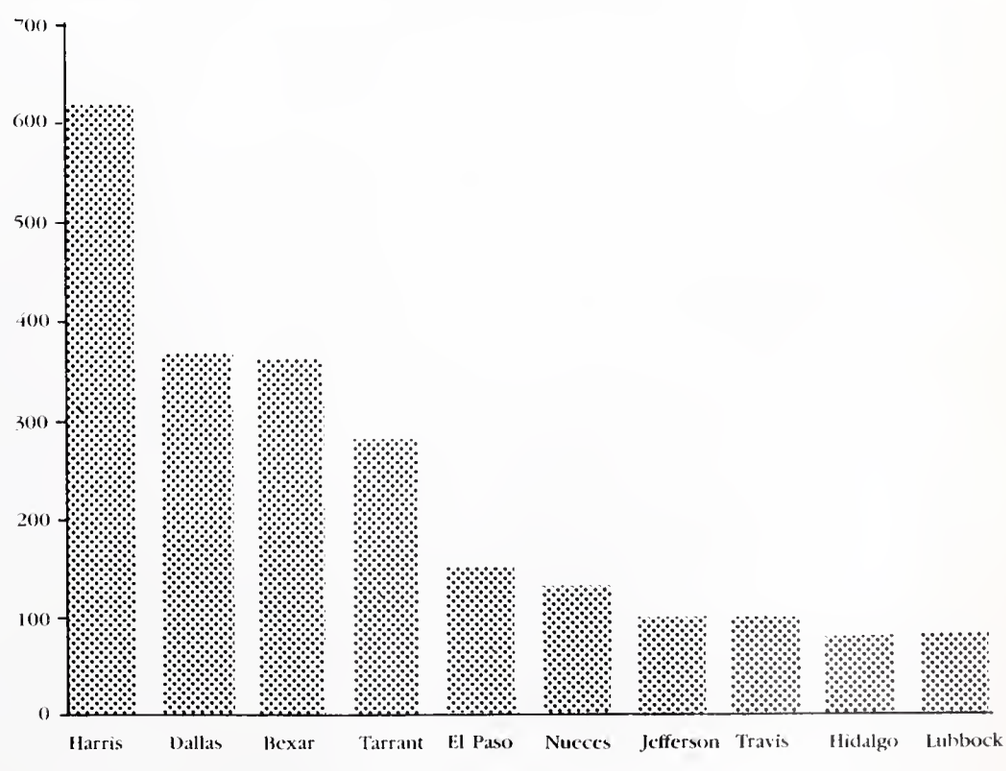
Mr Sconce adds, "The law is very clear that when we discover an overpayment, we have about three years in which to collect that back . . . . The Federal Claims Collection Act of 1966 and all the regulations that go with it say very clearly that we must do that . . . . Quite frankly, we're following our normal procedures and the law, where it says that if we discover an overpayment, we're obligated to collect it because it's taxpayers' money."

TMA contends that Blue Cross and Blue Shield of Texas, the state's Medicare carrier, acted lawfully and with HCFA's approval in paying beneficiaries and physicians, and that HCFA should not be allowed to "change their minds" because of a desire to improve the bottom line.

Raymond Conley agrees. "I thought always if I made mistakes I had to correct my own mistakes. It's the first time I ever heard of anything like this."

DONNA B. JONES
News Editor, *Texas Medicine*

County Medical Societies with greatest number of physicians affected



Rx for Accounts Receivable:

I.C. System, Inc.

When the problem is uncollected debts, the prescription is I.C. System.

If your medical practice is suffering from a case of delinquent accounts, call in the specialist for help: I.C. System. This company understands the special collections needs of health care professionals. I.C. System provides effective collection services while remaining sensitive to the unique doctor/patient relationship.

The **Texas Medical Association** began endorsing I.C. System in February 1983. Since then, I.C. System has recovered $8,825,000 in overdue accounts for **Texas Medical Association** members. Presently, almost 2,500 members have enrolled in the System and are benefiting from this vigorous collection program.

As a member of the Association, you are eligible for this service. So, if you want to bring your accounts receivables under control, arrange to enroll in I.C. System's easy-to-use program. For more information, just return the form below.

If you are already using I.C. System's program, here's how to get the most value from it. Refer your delinquent accounts to I.C. System within 60 to 90 days after they become due. The more promptly you do this, the more money you will recover.

To keep your practice financially healthy, consult with I.C. System.

Tell me more about this program endorsed by the Texas Medical Association.

Practice _____

Address _____

City _____ State _____ Zip _____ Phone _____

Send to: I.C. System, Inc.
444 East Highway 96
P.O. Box 64444
St. Paul, Minnesota 55164-0444

Medicare recoupment of alleged "overpayments"

On Oct 16, 1987, the Texas Medical Association and 20 other plaintiffs (1) filed suit against the US Department of Health and Human Services (HHS) and Blue Cross and Blue Shield of Texas (BC/BS), the contracting Medicare carrier, over the federal government's effort to recoup $14 million from physicians and patients for alleged "overpayments" during July 1985 to April 1986 (2). On Oct 29, a federal district court judge granted a preliminary injunction that halts the recoupment until a full hearing on the merits of the case is conducted and a decision reached. This article summarizes the facts leading up to the suit and explains the legal basis for the suit.

In July 1987, Blue Cross and Blue Shield of Texas (BC/BS), the state's Medicare carrier, sent collection letters to 5,000 physicians and 15,000 Medicare beneficiaries. Notices of collection activities were sent to 200,000 Medicare patients advising them that their physicians were "overpaid" and were being asked to refund the money. Many patients were confused. Some thought their physicians had done something wrong. Some on fixed incomes were concerned about the collection effort on bills paid one and a half to two years ago because they faced the threat that if they did not pay, the amount due would be taken out of their social security checks. Even the executors of the estates of deceased patients (usually spouses) received collection letters demanding repayment.

Basis of recoupment

When TMA learned of the recoupment effort, the association immediately began its review of the basis of the recoupment decision. Association representatives met with BC/BS and with HHS Region VI Administrator Jerry Sconce. TMA requested and received information under the Freedom of Information Act. At TMA's request, HHS extended the original repayment deadline from Sept 4 to Oct 18 so that TMA could complete its review before repayment.

A review of the information obtained in September and October 1987 indicated that neither Medicare law nor regulation required the recoupment. Under its contract with HHS and federal regulations and guidelines, BC/BS had the authority to pay physicians on a fee schedule basis as they did. Armed with this information, TMA President David Vanderpool, MD, requested an additional extension from Health Care Financing Administration (HCFA) Administrator William Roper. Additionally, after TMA called the "overpayment project" to the attention of the Texas Congressional delegation, the entire delegation (27 congressmen and two senators) sent a letter to HHS Secretary Otis Bowen asking that HHS stop the recoupment effort until TMA could evaluate the facts serving as the basis for the recoupment. After receiving no response to these letters, TMA had no choice but to file suit. Joining TMA in the suit were the Texas Ophthalmological Association (TOA), Texas Academy of Family Physicians, Texas Society of Internal Medicine, Travis County Medical Society, 11 physicians, one medical clinic and four patients.

BC/BS "reasonable charge" decision

In order to promote consistency among carriers, HCFA implemented a five-digit uniform Medicare procedure coding system for physician services called the HCFA Common Procedure Coding System (HCPCS) in 1984. Acting upon instructions from HCFA, BC/BS had been engaged, for a significant period of time before July 1, 1985, in converting the Texas Medicare Part B procedure coding system to the new HCPCS.

During the conversion, BC/BS experienced difficulties in matching historical customary and prevailing charge data to the applicable HCPCS codes. In response to various code conversion problems, including computer reprogramming requirements, and in order to begin timely processing of Part B claims under the new HCPCS codes, BC/BS employed its discretion in choosing a method for determining reasonable charges. The carrier chose to place several procedure codes on statewide fee schedules, meaning that for these particular physician services the same "reasonable charge" would apply for all such services rendered in the state of Texas. In doing so, BC/BS was acting within its authority granted by statute, regulation, and contract as a Medicare Part B carrier. Commencing in or about July 1985, Medicare claims submitted under these procedure codes were not reimbursed on the basis of historical customary and prevailing charge data. Instead, these claims were reimbursed on the basis of the predetermined rates (fee schedules) established by BC/BS. BC/BS had, or believed that it had, HCFA's specific approval to use the statewide fee schedule. Use of such fee schedules in the absence of the valid data or experience necessary to implement other "reasonable charge" determinations was within the powers granted by law and by contract to BC/BS as Medicare carrier.

Change in "reasonable charge" noticed

Neither HHS nor BC/BS officially notified Texas physicians that the subject procedure codes had been or were being placed on statewide fee schedules. Some Texas physicians, however, were aware of the difficulties BC/BS experienced in converting to the HCPCS coding system. Noting changes in their reimbursement levels for some of the procedure codes that had been placed on statewide fee schedules, many physicians communicated with BC/BS with respect to proper coding and payment levels. BC/BS representatives uniformly assured these physicians that the payment levels for their services were correct.

In addition to communications between individual physicians and BC/BS, a committee of TOA met and otherwise communicated with BC/BS on numerous occasions during 1984, 1985, and 1986 to discuss the codes that are subject to the

Medicine and the Law articles are intended to help physicians understand the law by providing legal information on selected topics. This article is published with the understanding that TMA is not engaged in providing legal advice. When dealing with specific legal matters readers should seek assistance from their own attorneys.

"overpayment project." Using information obtained during these contacts with BC/BS, committee members communicated with individual TOA members regarding proper coding and payment levels for various procedures. At no time before August 1987 did the Secretary or BC/BS advise any committee, TOA, or any other plaintiff or physician, that BC/BS was not authorized to use statewide fee schedules for the subject procedure codes.

HHS ordered change

Plaintiffs believe that in or about November 1985, the Secretary of HHS decided that BC/BS should not be using a statewide fee schedule for the subject procedure codes. This decision was not then communicated to affected physicians or patients. In January 1986, HHS instructed BC/BS to remove the subject procedure codes from the statewide fee schedules. However, due to computer reprogramming requirements, BC/BS continued using the statewide fee schedule until on or about April 1, 1986, when they recommenced use of reconstructed historical "customary and prevailing charge profiles" for these procedures. During April 1986, the affected physicians and patients were not informed that the Secretary or BC/BS considered the prior use of a statewide fee schedule to have been illegal.

BC/BS paid the subject procedure codes on the basis of the statewide fee schedule for approximately nine months, from in or about July 1985 through on or about April 1, 1986 (precise dates may vary among some of the subject procedure codes, and the levels of the statewide fee schedules may have changed for some of the subject procedure codes during the subject period).

Adjustments and overpayments not recognized

Texas physicians received official notification of a change in reimbursement for several procedure codes in Special Medicare Newsletter No 49, dated March 14, 1986, and Physician Medicare Newsletter No 226, dated Aug 1, 1986. BC/BS prepared these newsletters. They informed physicians that several procedure codes that had been reimbursed according to the statewide fee schedule, including the subject procedure codes, henceforth would be reimbursed on the basis of reconstructed historical customary and prevailing charge data.

Both newsletters stated, "Adjustments and/or overpayment requests will not be recognized by the carrier." Neither newsletter, nor any other communication in 1986 from the Secretary or BC/BS to physicians and patients, stated that prior use of statewide fee schedules had been illegal. According to these newsletters, BC/BS did not intend to "recoup" (that is, to recover by means of demand or offset from future payments due) money paid for the subject procedure codes that had been reimbursed on the basis of the statewide fee schedules.

BC/BS representatives also informed physician attendees at a BC/BS-sponsored Medicare coding seminar on July 7, 1986, that BC/BS would not recoup monies for services that were paid under the statewide fee schedules during the subject period and later converted to payment on the basis of reconstructed historical customary and prevailing charge data.

HHS changes mind

HHS subsequently determined that, with regard to the 18 subject procedure codes, use of the statewide fee schedule during the subject period resulted in higher payments than would have been paid to or on behalf of Part B beneficiaries if BC/BS had reconstructed and used historical charge data during the subject period. HCFA arbitrarily concluded that the "reasonable charge" methodology, which resulted in a higher rate of payment was inappropriate and constituted an "overpayment" to or on behalf of Part B beneficiaries. The Secretary of HHS had HCFA instruct BC/BS to institute "the overpayment project" with respect to these 18 procedure codes. HHS has advised physicians and patients of the following options under the recoupment program: (1) pay the amounts requested, (2) seek an installment payment agreement with Medicare, or (3) have the money taken out of future Medicare payments (50 cents on the dollar for physicians) or future social security checks (for patients).

Was there an "overpayment"?

Plaintiffs have argued to the court that there was no overpayment. Medicare regulations and the Medicare Carrier's Manual ("Manual") describe numerous situations in which carriers are instructed to exercise judgment or discretion in the threshhold issues that go into the overall determination of "reasonable charge." BC/BS did not require permission from HHS or HCFA before making payments using the statewide fee schedule. HHS conclusions that recoupment is required appear to be based on consideration of the bottom line financial impact on the Medicare Part B program, not on a statutory or regulatory requirement.

Were physicians and patients "at fault"?

Section 1870 of the Social Security Act discusses potential physician and beneficiary liability in the event of an "overpayment." That section introduces the important concept that overpayment recipients who are "without fault" are not liable (3). Thus, even if there were "overpayments," the recipients of those payments are not liable unless they were at fault.

All physicians who contacted Medicare when they noticed payment differences were assured that the payments were correct. BC/BS Special Medicare Newsletter No 49 of March 14, 1986, advised physicians that procedure codes that had been calculated on a "fee basis" would be reimbursed on a profile basis and "adjustments and/or overpayments requests would not be recognized." Physicians had no reason to question the "reasonable charge" determination of BC/BS under these circumstances. They were assured that the "reasonable charge" determinations were correct.

Court action requested

TMA is asking the court to stop the recoupment effort against physicians and patients. This relief would include stopping any collection through reductions in physicians' future Medicare payments or patients' social security checks. Also, TMA has requested that the court stop collection efforts that place a wedge between physicians and patients, which can adversely

affect diagnosis and treatment. The preliminary injunction granted by Federal District Court Judge James Nowlin halts the Medicare recoupment effort until the court decides the merits of the recoupment decision. HHS cannot make assessments against physicians' future Medicare payments or patients' social security checks.

Finally, TMA is attempting to recover money already paid in response to the recoupment effort. This will require extensive time and effort to accomplish. It will require a full hearing in which the plaintiffs (a) prevail on the merits of the case and (b) overcome the government's assertion of sovereign immunity, the assertion that the government is not liable for financial damages because it has not legislatively consented to this type of suit based on a Medicare Part B claim. Plaintiffs also seek to identify "underpayments," which were paid on the same basis as were the alleged "overpayments."

TMA and the other plaintiffs believe these claims are viable and worth the effort on behalf of the patients and physicians adversely affected. About 6,000 procedure codes are paid on a statewide fee schedule basis. Challenging this recoupment effort will cause HHS officials to think twice before changing their minds on Medicare carriers' valid "reasonable charge" determinations due to retrospective "bottom-line" determinations.

DONALD P. "ROCKY" WILCOX, JD
TMA General Counsel

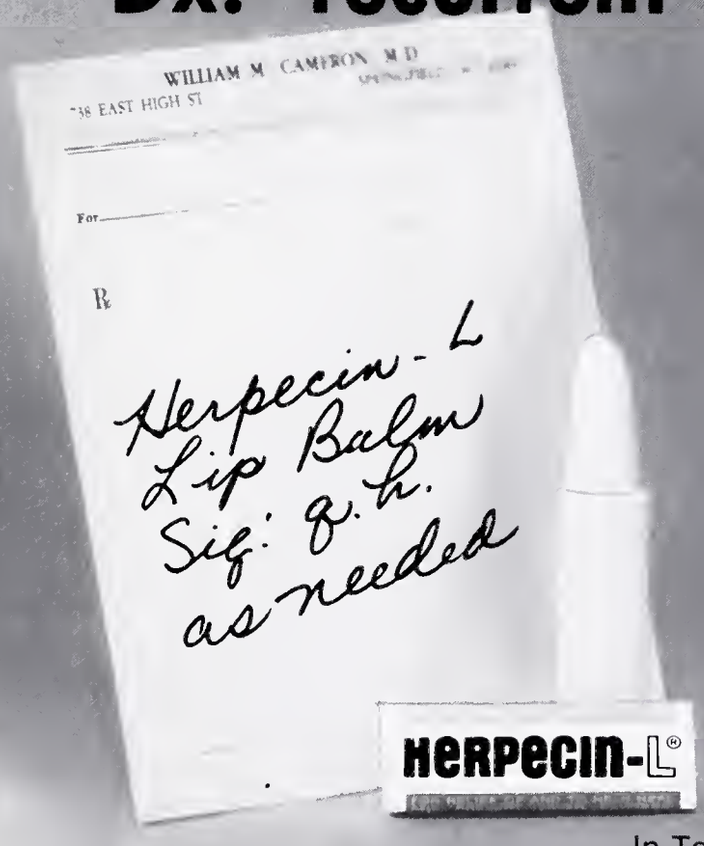
REFERENCES

1. Texas Medical Association; Travis County Medical Society; Texas Academy of Family Physicians; Texas Ophthalmological Association; Texas Society of Internal Medicine; Earl D. Bellamy, MD; Leslie L. Cortes, MD; Karlan June Lockey Downing, MD; Pablo Garza, MD; James M. Graham, MD; John M. Haley, MD; Craig K. King, MD; William E. McCaleb III, MD; San Antonio Medical Associates; Roberto San Martin, MD; Gordon W. Scott, MD; Robert Frank White, MD; Maggie M. Moore; Cleo Marie Gossett; Madeline C. Miles; and Raymond Conley, Community Administrator of the Estate of Ovetta Conley, Deceased.

2. TMA et al v Bowen, CA 87-688, US Dist Ct for Western District of Texas, Austin Division.

3. 42 USC 1395gg(b).

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms . . .** blisters **never formed . . .** remarkable." DH, MA

"(In clinical trials) **. . . response** was **dramatic. HERPECIN-L . .** proven **far superior.**" DDS, PA

"All patients claimed **shorter duration . . .** at **prodromal symptoms . . .** HERPECIN-L **averted** the attacks." MD, AK

OTC. *See P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Texas HERPECIN-L is available at all *Eckerd, Revco and Walgreens* and other select pharmacies.

"LOOK TO US FIRST FOR A CAREER"

The University of Texas Medical Branch at Galveston is seeking applicants for employment with the Texas Department of Corrections for the position of:

CHIEF OF STAFF

This individual must hold a current license to practice medicine in the State of Texas. Candidates are being sought who possess strong clinical (5 years, may include residency program) and (2 years) administrative/supervisory experience in health care, preferably in an institutional setting. The Chief of Staff oversees and coordinates health care delivery for all TDC units and reports directly to the Medical Director. Excellent fringe benefits with no state income tax. Salary to $100,000. Please send curriculum vitae to:

Texas Department of Corrections
Medical Personnel
P.O. Box 99
Huntsville, Texas 77342-0099
(409) 294-2755

AN EQUAL OPPORTUNITY EMPLOYER M/F

TDC Texas Department Of Corrections

SOUTHWEST MEDICAL ASSOCIATES

EMERGENCY PHYSICIAN

Exceptional opportunity for well trained, career oriented Emergency Physician to join busy Urgent Care facility (24 hours a day/7 days a week) in multispecialty group practice in Las Vegas, Nevada, population 500,000+. Requires BC/BE in a primary care specialty with emergency room/urgent care experience, or emergency medicine.

Excellent benefit package including paid malpractice insurance and relocation.

Send CV and three references to:

SOUTHWEST MEDICAL ASSOCIATES
Employment
P. O. Box 15645
Las Vegas, NV 89114-5645

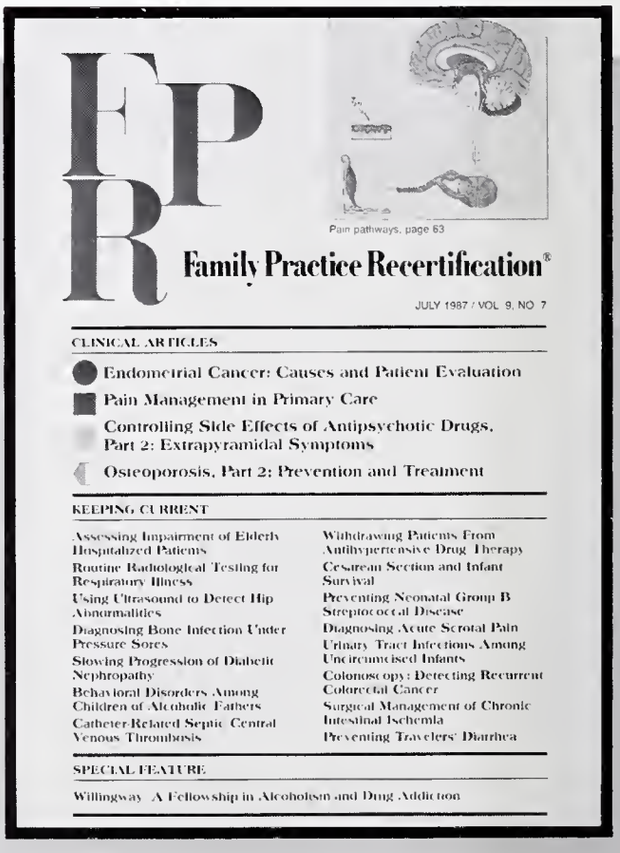
Equal Opportunity Employer

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology

- Provides 20 hours of CME Category 1 Credit


FPR
Pain pathways, page 63
Family Practice Recertification®
JULY 1987 / VOL 9, NO 7
CLINICAL ARTICLES
Endometrial Cancer: Causes and Patient Evaluation
Pain Management in Primary Care
Controlling Side Effects of Antipsychotic Drugs, Part 2: Extrapyramidal Symptoms
Osteoporosis, Part 2: Prevention and Treatment
KEEPING CURRENT
Assessing Impairment of Elderly Hospitalized Patients
Routine Radiological Testing for Respiratory Illness
Using Ultrasound to Detect Hip Abnormalities
Diagnosing Bone Infection Under Pressure Sores
Slowing Progression of Diabetic Nephropathy
Behavioral Disorders Among Children of Alcoholic Fathers
Catheter-Related Septic Central Venous Thrombosis
Withdrawing Patients From Antihypertensive Drug Therapy
Cesarean Section and Infant Survival
Preventing Neonatal Group B Streptococcal Disease
Diagnosing Acute Scrotal Pain
Urinary Tract Infections Among Uncircumcised Infants
Colonoscopy: Detecting Recurrent Colorectal Cancer
Surgical Management of Chronic Intestinal Ischemia
Preventing Travelers' Diarrhea
SPECIAL FEATURE
Willingway: A Fellowship in Alcoholism and Drug Addiction

PRACTICAL ▪ CLINICAL ▪ EDUCATIONAL ▪ CURRENT

L.E. Arnold
Lawrence E. Arnold, MD, a Dallas gynecologist, died Aug 9, 1987. He was 79.

A native of Dallas, Dr Arnold was a 1931 graduate of Baylor University College of Medicine. He served an internship at St Paul's Hospital in Dallas and a residency at the Chicago Lying-in Hospital. Following postgraduate study at the Mayo Clinic, Rochester, Minn, he opened a private practice in Dallas.

H.T. Barkley, Jr
H. Thomas Barkley, Jr, MD, professor of radiotherapy at The University of Texas System Cancer Center, M.D. Anderson Hospital & Tumor Institute, died Aug 10, 1987, at age 60.

Dr Barkley, born in Tampico, Mexico, was a resident of Houston most of his life. He attended Texas A&M University, the University of Arizona, and received his medical degree in 1952 from Baylor University College of Medicine. He received thoracic surgery training at Columbia Presbyterian Medical Center in New York, the Medical College of Virginia in Richmond, and the Presbyterian and Episcopal Hospital in Philadelphia, with additional training at M. D. Anderson Hospital.

Dr Barkley is survived by his wife, Barbara Barkley, Houston; son, H. Thomas Barkley III, Houston; daughters, Leslie B. Moser, Austin, and Sara B. Duke, Hunt, Tex; and mother, Margaret Barkley, Houston.

J.P. Barnes
J. Peyton Barnes, Sr, MD, a Houston surgeon and honorary Texas Medical Association member, died Aug 11, 1987.

Dr Barnes, 84, was born in Trinity, Tex. He was a 1928 graduate of the University of Texas Medical School in Galveston. After serving an internship at Mercy Hospital in Baltimore, Md, and a residency at John Sealy Hospital in Galveston, he received postgraduate training at the University of Pennsylvania School of Medicine, Philadelphia. Dr Barnes was past chief of staff and chief of surgical staff of St Joseph Hospital in Houston. He also was past president of the Texas Surgical Society and a former member of the Board of Governors of the American College of Surgeons.

Surviving family members include his wife, Gertrude Kott Barnes, Houston; sons, J. Peyton Barnes, Jr, MD, Houston, and Frank Lister Barnes II, MD, Houston; sister, Virginia McKinney, Fort Worth; and one grandchild.

J.F. Bida
John F. Bida, MD, a retired Arlington family physician, died Aug 23, 1987. He was 65.

Born in Mingus, Tex, Dr Bida completed his first two years of medical school at The University of Texas Medical School at Galveston, and received his medical degree in 1948 from the University of Oklahoma, Oklahoma City. He was in the US Navy during the latter part of World War II. Dr Bida was in private practice in Arlington from 1949 until his retirement last year. In 1960, he received his law degree from Southern Methodist University and practiced law from 1960 to 1961.

Dr Bida is survived by his wife, Lucille Bida, Arlington; son, Dan F. Bida, DDS, Arlington; daughters, Janet Bida Ritchey, DDS, Arlington, Melinda K. Fisher, Dallas; and Lizanne Gierczak, Los Alamitos, Calif; mother, Vera S. Bida, Haltom City, Tex; sisters, Marie Keyser, Waukesha, Wis, and Pauline Harder, Louisville, Ky; and seven grandchildren.

G. Cooper
Grundy Cooper, MD, a Carthage family physician for 33 years, died Aug 19, 1987. He was 63.

Dr Cooper was born in Mansfield, La, and received his medical degree in 1946 from Tulane University School of Medicine in New Orleans. He served his internship at Charity Hospital, now Louisiana State University Medical Center, in Shreveport, La. Dr Cooper was a captain in the US Army during the Korean Conflict.

Surviving Dr Cooper are his wife, Eleanor Cooper, Carthage; son, Greg Cooper, Dallas; brothers, Albert S. Cooper Jr, New Orleans, and Jerry Cooper, Haughton, La; and sister, Sarah Hewett, Lake Charles, La.

F.J. Crumley
Frederic J. Crumley, MD, Canadian, died Aug 13, 1987. He was 88.

Born in Ennis, Tex, Dr Crumley was a 1931 graduate of Baylor University College of Medicine. He served his internship at Parkland Memorial Hospital in Dallas, and was a resident at the Eye, Ear, Nose, and Throat Hospital in New Orleans. He also served as an instructor at Tulane University, New Orleans. Dr Crumley was an ophthalmologist and otolaryngologist in Amarillo from 1936 until his retirement in 1970.

Surviving family members include his wife, Adele Crumley, Canadian; daughters, Cornelia Varnell, Canadian, and Adele Kipp, Montrose, SD; and seven grandchildren.

F.L. Duff
Fratis L. Duff, MD, former commissioner of health, Texas Department of Health, died Aug 2, 1987. He was 78.

A native of Randlett, Okla, Dr Duff was an honorary member of Texas Medical Association. In 1939, he received his medical degree with honors from the University of Oklahoma School of Medicine. After an internship at Colorado General Hospital, Denver, he entered the Army Medical Corps in 1940. While in the service, he served as chief of tropical medicine at the US Air Force School of Aviation Medicine, commandant of the US Air Force Medical School at Gunter Air Force Base, surgeon of the Air Force Systems Command at Andrews Air Force Base, and tactical air command surgeon at Langley Air Force Base. He was promoted to brigadier general in 1963. Dr Duff received his doctorate of public health from The Johns Hopkins School of Medicine in 1953. Dr Duff retired from the Air Force in 1968 and joined the Texas State Department of Health where he was appointed commissioner of health in 1975 and served until his retirement in 1978.

Surviving family members include his wife, Bess Kellogg Duff, Austin; son, Dennis E. Duff, Austin; brother, Dan M. Duff, Rockport, Me; and two grandchildren.

G. Gran
Gerson Gran, MD, a Dallas pediatrician, died Aug 7, 1987. He was 61.

Dr Gran was born in Havana, Cuba. He was a 1952 graduate of Havana Medical School and served his internship and residency at Georgia Baptist Hospital in Atlanta. He began his practice in Raymondville, Tex, and moved to Dallas in 1959 where he practiced until his retirement earlier this year.

He is survived by his wife, Mina Gran; son, Keith Gran; and daughter, Rosaline Gran Brent; all of Dallas.

W.H. Long

William H. Long, MD, a longtime Pharr family physician, died Aug 17, 1987. He was 84.

Dr Long was born in Darien, Ga, and graduated in 1927 from the Medical College of Georgia, Augusta. Following his internship, he practiced medicine in Birmingham, Ala, from 1931 to 1942. He served in the US Air Force until 1946 when he moved to Pharr.

Dr Long is survived by his wife, Elizabeth Long, Pharr; daughters, Virginia D. Curti, Miami, and Peggye A. Long, Atlanta; and three grandchildren.

J.W. May

Joe W. May, MD, former Hidalgo County public health officer and honorary Texas Medical Association member, died Aug 11, 1987.

Dr May, 81, was born in Durant, Miss. A graduate of the University of Mississippi, he received his medical degree in 1930 from the University of Tennessee Medical School. He served his internship at Baptist Memorial Hospital in Memphis, and practiced briefly in Oklahoma City before moving to Donna, Tex, in 1931 to practice medicine. In 1942, he was appointed Hidalgo County health officer; in 1943, he began private practice in Edinburg.

Surviving family members include his wife, Marianna May, Edinburg; daughters, Joanna Tanner, McLean, Vir, and Sandra Wyllie, Midland, Tex; sister, Georgie Williams, Yazoo City, Miss; and three grandchildren.

W.C. Mieher, Jr

William C. Mieher, Jr, MD, a San Angelo cardiologist, died Aug 20, 1987. He was 56.

Born in Memphis, Dr Mieher completed his premedical training at Washington & Lee University in Lexington, Va, and received his medical degree from Tennessee College of Medicine in 1955. From 1956 to 1958 he served in the Air Force as a flight surgeon. He was discharged with the rank of captain. He served his residency at the Henry Ford Hospital in Detroit, and moved to San Angelo in 1963. Dr Mieher served as president of the Tom Green Eight County Medical Society in 1980.

Surviving family members include his wife, Sherry Mieher, San Angelo; sons, William D. Mieher, Austin, and Stuart R. Mieher, Atlanta; and one grandchild.

A.W. Sommer

Arno W. Sommer, MD, a Temple radiologist, died July 29, 1987. He was 85.

Dr Sommer was born in Manitowac County, Wis. He received his medical degree from the University of Minnesota in 1927 and served an internship at Swedish Hospital in Minneapolis prior to establishing a private practice in Elmore, Minn. He moved to Temple in 1948 and served a radiology residency at Scott and White Memorial Hospital. He was appointed to the senior staff there in 1951 and was chief of the Department of Radiology from 1956 to 1966. He retired from medicine in 1971.

Dr Sommer is survived by his wife, Eunice Sommer, Temple; son, John P. Eberts, MD, Temple; daughters, Patricia Sommer Lilley, Roswell, NM, and Jean Withers, Oklahoma City; brother, William Sommer, Elgin, Ill; and 12 grandchildren.

C.I. Stell

Cecil I. Stell, MD, a Dallas eye, ear, nose and throat specialist, died Aug 23, 1987.

Dr Stell, 73, was born in Cooper, Tex, and graduated from Baylor University College of Medicine in 1937. After an internship and residency at Parkland Hospital, Dallas, he served in World War II as a US Navy medical officer in the Pacific.

He is survived by his wife, Patsy E. Stell, Dallas; sons, Allen Stell and Raymond Stell, both of Dallas, and Cecil Stell, Jr, Riverside, Calif; daughters, Amy Stell, Dallas, Janet McEnerny, Nashville, Tenn, and Mary Ann Harris, Fort Worth; brother, Lawrence I. Stell, Dallas; nine grandchildren and two great-grandchildren.

W.B. Weary

William B. Weary, MD, a Dallas neurosurgeon, died Aug 11, 1987. He was 79.

A native of Chester, Neb, Dr Weary graduated from the University of Chicago Medical School in 1936. He served his internship at The Johns Hopkins Hospital, Baltimore, and residencies at The Union Memorial Hospital, Baltimore, and Albany Hospital, Albany Medical School, Albany, NY. He was in the US Army Medical Corps during World War II and was discharged with the rank of captain.

Surviving family members include his wife, Helen Weary, Dallas; son, Andrew Weary, MD, Austin; daughter, Anne Weary, Garland; brothers, Robert Weary, York, Neb, and Rev Gerald Weary, New Castle, Me; sister, Louise Catlett, Tecumseh, Neb; and two grandchildren.

H.R. Wilcox, Jr

Howard R. Wilcox, Jr, MD, a Beaumont pathologist, died Aug 17, 1987. He was 62.

Dr Wilcox was born in Gresham, Neb, and attended the University of Nebraska, where he received his medical degree in 1951. After an internship and residency at University Hospital in Omaha, he practiced in Illinois for a short time before moving to Beaumont. He served in the US Army and was discharged with the rank of sergeant.

Surviving family members include his wife, Irma Lou Wilcox, Beaumont; sons, Rex E. Wilcox, San Antonio, Howard D. Wilcox, Langley Field, Vir, and Peter Wilcox, Beaumont; daughter, Mary Lou Wilcox, Houston; sisters, Marcia Dunlay, Axtell, Neb, and Elane Wilcox, Montgomery, Ala; and two grandchildren.

B.V. Williams

Bryan V. Williams, MD, a Houston surgeon, died Aug 10, 1987. He was 68.

A native of Pittsburgh, Dr Williams was a 1941 graduate of the University of Pittsburgh and a 1943 graduate of the University of Pittsburgh Medical School. He served his internship at the Pittsburgh Hospital and a general surgery residency at St. Joseph Hospital, Houston. During World War II, he was a lieutenant in the US Navy, attached to the First Marine Division, fighting in the South Pacific Theater. He participated in the invasion of Okinawa and served with the occupation forces in Peking, China. Dr Williams was former chief of staff at St. Joseph Hospital.

He is survived by his wife, Jean Davis Williams; sons, Richard Bryan Williams and Robert Victor Williams, and daughter, Mary Victoria Williams; all of Houston.

HOSPITAL EMERGENCY MANAGEMENT OF RADIATION ACCIDENTS

Although accidents involving radioactivity are rare, the possibility will increase as more uses for radioactivity and radiosiotopes are developed. The Joint Commission on Accrediation of Hospitals requires that hospitals have written procedures for the emergency management of individuals who have actual or suspected exposure to radiation or who are radioactively contaminated.

The American Medical Association has prepared **"A Guide to the Hospital Management of Injuries Arising from Exposure to or Involving Ionizing Radiation."** The Committee on Nuclear Medicine of the Texas Medical Association recommends the guidelines in this document. To supplement this guide, the Committee on Nuclear Medicine has prepared an outline for planning for such emergencies with a check-list approach to developing an emergency plan.

To obtain the AMA **"A Guide to the Hospital Management of Injuries Arising from Exposure to or Involving Ionizing Radiation"** and the TMA Committee on Nuclear Medicine's outline, complete and return this form with your check for $15.00 to cover materials cost and handling.

Ann Gregg
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

_____
(Hospital)

_____
(Name)

_____
(Street Address)

_____
(City) **(State)**

IN MEMORIAM

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

L. E. ARNOLD
Dallas, 1908–1987

H. T. BARKLEY, JR
Houston, 1926–1987

J. P. BARNES
Houston, 1903–1987

J. F. BIDA
Arlington, 1922–1987

G. COOPER
Carthage, 1923–1987

F. J. CRUMLEY
Canadian, 1899–1987

F. L. DUFF
Austin, 1910–1987

G. GRAN
Dallas, 1926–1987

W. H. LONG
Pharr, 1902–1987

J. W. MAY
Edinburg, 1906–1987

W. C. MIEHER, JR
San Angelo, 1931–1987

A.W. SOMMER
Temple, 1901–1987

C. I. STELL
Dallas, 1914–1987

W. B. WEARY
Dallas, 1908–1987

H. R. WILCOX, JR
Beaumont, 1924–1987

B. V. WILLIAMS
Houston, 1919–1987

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas.

The Friends of the TMA Memorial Library is an organization dedicated to enhancing the Library collection through support by individuals. Funds for this organization are raised through membership recruitment and memorial donations and are added to the Texas Memorial Medical Library Fund.

Contributions to the Texas Memorial Medical Library Fund provide a valuable support function to the Memorial Library which offers a full range of medical reference and audio-visual services to TMA members throughout the state.

THE FRIENDS OF THE TMA MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

ANNUAL MEMBERSHIP ENROLLMENT

I wish to become enrolled as a Friend.

☐ Student $ 5.00 ☐ Patron $ 100.00
☐ Sustaining $15.00 ☐ Life $1,000.00
☐ Subscribing $25.00

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

HONOR AND MEMORIAL GIFTS

☐ In memory of ☐ In honor of

NAME _____

OCCASION _____

PLEASE NOTIFY:

_____

_____

Medicine in Literature is a randomly selected sample of medical texts recently purchased by the TMA Memorial Library. In 1987 the library added more than 600 book titles to its 60,000-volume collection of books and bound journals, and regularly increases its holdings of motion pictures, audiocassettes, videocassettes, and slide presentations. In addition, the library subscribes to 1,035 medical and health-related journals. For additional information, call the Memorial Library at (512) 477–6704.

In the TMA Library

Andreoli KG, Zipes DP, Wallace AG, et al (eds): *Comprehensive Cardiac Care,* ed 6. St Louis, The CV Mosby Company, 1987.

Beyer-Machule CK, von Noorden GK (eds): *Lids, Orbits, Extraocular Muscles,* vol 1 in Heilmann K, Paton D (eds): *Atlas of Ophthalmic Surgery.* New York, Georg Thieme Verlag, 1985.

Brassard MR, Germain R, Hart SN: *Psychological Maltreatment of Children and Youth.* New York, Pergamon Press, 1987.

Brenner MA: *Management of the Diabetic Foot.* Baltimore, Williams & Wilkins, 1987.

Clark DA: *Coronary Angioplasty.* New York, Alan R Liss, Inc, 1987.

Dignan MB, Carr PA: *Program Planning for Health Education and Health Promotion.* Philadelphia, Lea & Febiger, 1987.

Donabedian A, Axelrod SJ, Wyszewianski L, et al: *Medical Care Chartbook,* ed 8. Ann Arbor, Mich, Health Administration Press, 1986.

Emery AEH: *Duchenne Muscular Dystrophy.* New York, Oxford University Press, 1987.

Fairbanks DNF, Fujita S, Ikematsu T, et al: *Snoring and Obstructive Sleep Apnea.* New York, Raven Press, 1987.

Ferguson, T: *The Smoker's Book of Health. How to Keep Yourself Healthier and Reduce Your Smoking Risks.* New York, GP Putnam's Sons, 1987.

Friedman EA, Acker DB, Sachs BP: *Obstetrical Decision Making,* ed. 2. Philadelphia, BC Decker Inc, 1987.

Fulmer TT, O'Malley TA: *Inadequate Care of the Elderly. A Health Care Perspective on Abuse and Neglect.* New York, Springer Publishing Company, 1987.

Grant, WM: *Toxicology of the Eye. Effects on the Eyes and Visual System from Chemicals, Drugs, Metals and Minerals, Plants, Toxins and Venoms; also, Systemic Side Effects from Eye Medications,* ed 3. Springfield, Ill, Charles C Thomas Publisher, 1986.

Kahn J: *Principles and Practice of Electrotherapy.* New York, Churchill Livingstone, 1987.

Legrain M: *Nephrology.* New York, Masson Publishing USA, Inc, 1987.

Levy J: *A Practical Approach to Pediatric Gastroenterology.* Chicago, Year Book Medical Publishers, Inc, 1988.

Millar AP: *Sports Injuries and Their Management.* Baltimore, Williams & Wilkins, 1987.

Nyhan WL, Sakati, NA: *Diagnostic Recognition of Genetic Disease.* Philadelphia, Lea & Febiger, 1987.

Online Databases in the Medical and Life Sciences. New York, Cuadra/Elsevier, 1987.

Rosen P, Baker FJ II, Barkin RM, et al (eds): *Emergency Medicine. Concepts and Clinical Practice,* (2 vols), ed 2. St Louis, The CV Mosby Company, 1988.

Simon RH, Sayre JT: *Strategy in Head Injury Management.* Norwalk, Conn, Appleton & Lange, 1987.

Spirt BA, Gordon LP: *Prenatal Ultrasound. A Color Atlas with Anatomic and Pathologic Correlation.* New York, Churchill Livingstone, 1987.

Stark RB (ed): *Plastic Surgery of the Head and Neck* (2 vols). New York, Churchill Livingstone, 1987.

Sutton D (ed): *A Textbook of Radiology and Imaging* (2 vols). New York, Churchill Livingstone, 1987.

Trad PV: *Infant and Childhood Depression. Developmental Factors.* New York, John Wiley & Sons, 1987.

Washton AM, Gold MS (eds): *Cocaine. A Clinician's Handbook.* New York, The Guilford Press, 1987.

Watkins RG, Collis JS Jr (eds): *Lumbar Discectomy and Laminectomy.* Rockville, Md, Aspen Publishers Inc, 1987.

Wender PH: *The Hyperactive Child, Adolescent, and Adult. Attention Deficit Disorder Through the Lifespan.* New York, Oxford University Press, 1987.

Whittaker JA, Delamore IW (eds): *Leukaemia.* Boston, Blackwell Scientific Publications, 1987.

Williams P: *The Living Will Source Book With Forms.* Oak Park, Ill, The P Gaines Co, 1986.

Texas Physicians' Directory

ALLERGY

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, MD
FOUNDER-CONSULTANT

Theodore J. Haywood, MD
Orville C. Thomas, MD
Joseph T. Queng, MD
Lawrence G. Thorne, MD
Venugopal K. Menon, MD
Robert E. Smith, MD
Gerald T. Machinski, MD
Theresa C. Queng, MD
Waldo M. Martinez, MD
Lyna Kit Lee, MD
Harlan W. Sindell, MD

RESEARCH ASSOCIATES
Michael H. Smolensky, PhD
Alain Reinberg, MD, PhD
Chinavudh Wanissorn, PhD
Glenna M. Kyle, PhD

CONSULTANTS
Evan M. Hersh, MD
IMMUNOLOGY
James A. Knight, MD
PSYCHIATRY
R. John Prevost, MS
AIR POLLUTION
Reuben D. Wende, PhD
ANTIGEN AND CLINICAL LABORATORIES
John A. Thomas, PhD
CLINICAL PHARMACOLOGY
Thomas D. Downs, PhD
BIOMETRICS
Warren E. Schaller, HSD
Charles F. Kegley, PhD
ALLIED HEALTH SCIENCES
Hester Beth Bland, HSD
HEALTH EDUCATION
George R. Kerr, MD
NUTRITION

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025; 713 661-1444

JAMES A. CAPLIN, MD
AAA, ACA, AACIA

Allergy, Asthma, and Clinical Immunology

2550 Morgan Avenue, Corpus Christi, Texas 78405
Telephone 512 888-6782

ANESTHESIOLOGY

EDWARD A. TALMAGE, MD, PA
Diplomate American Board of Anesthesiology
Pain Management Nerve Blocks: Cervical, Thoracic & Lumbar Epidural Steroid & Neurolytic; Differential Spinal & Epidural; Cervical & Lumbar Sympathetic, Celiac Plexus, Peripheral Neurolytics; Diagnostic & Therapeutic
Suite 407, West Houston Doctors Center, 12121 Richmond Avenue, Houston 77082; 713 496-1006

THE UNIVERSITY CENTER FOR PAIN MEDICINE AT HERMANN
Hermann Hospital, 6411 Fannin, Houston, Texas 77030
713 797-2732

A multidisciplinary center which offers comprehensive treatment options for acute, subacute, and chronic pain patients. The center's total management of each patient's pain recognizes both the central *and* peripheral components of the syndrome.

PRITHVI RAJ, MD, FACA, FFARCS
Orthopaedist
Diplomate American Board of Anesthesiology

SHELLY LISS, MD
American Board of Physical Medicine and Rehabilitation

Representing the Profession

. . . Another service of your association

CLINICS

Two complete neurological and behavioral medicine facilities dedicated to DIAGNOSIS AND COMPREHENSIVE CARE OF PATIENTS WITH CHRONIC RECURRENT HEADACHES with emphasis on prophylactic treatment.

HOUSTON HEADACHE CLINIC
Park Plaza Prof. Bldg.
1213 Hermann Dr. #855
Houston, Texas 77004
713 528-1916

DALLAS HEADACHE CLINIC
Douglas Plaza
8226 Douglas Ave. #325
Dallas, Texas 75225
214 692-7011

CAT scan; EEG; EMG; Evoked Potentials; Thermography; Personality, Behavioral and Psychological Evaluations. Multimodality approach to management of headache including prophylactic medications, biofeedback and behavioral therapy.

NINAN T. MATHEW, MD, FRCP (C)
Neurologist-Director

DALLAS DIAGNOSTIC ASSOCIATION
7777 Forest Lane, Suite B-322, Dallas, Texas 75230
214 991-6000

CARDIOLOGY
J. Edward Rosenthal, MD, FACC
David A. Schwartz, MD

GASTROENTEROLOGY
Paul K. Anderson, MD
Roger C. Camp, MD
Lannie R. Hughes, MD

HEMATOLOGY AND ONCOLOGY
Barry D. Brooks, MD
Charles S. White, III, MD

INTERNAL MEDICINE
Joan P. Donley, MD
Larry Dossey, MD
Freda Gardner, MD
Tom L. Hampton, MD
C. Thomas Long, III, MD
Jack F. Melton, MD
Joe H. Sample, MD
Frank O. Seay, MD
Peter S. Stack, MD
Rick T. Waldo, MD

Diplomates American Boards of Internal Medicine, Cardiology, Gastroenterology, Hematology and Oncology

COLON & RECTAL SURGERY

FT. WORTH PROCTOLOGIC CLINIC, PA
Colon and Rectal Surgery and Colonoscopy
Sommai Sehapayak, MD, FACS, FICS

Diplomate American Board of Colon and Rectal Surgery

1050 West Rosedale, Fort Worth, Texas 76104;
817 338-4501 (24 hours)

DAVID S. PITA, MD
COLON & RECTAL SURGEON
OUT-PATIENT LASER HEMORRHOIDECTOMY

Bowel obstruction from cancer of the colon, volvulus, Crohn's or ulcerative colitis, toxic megacolon, diverticular obstruction, acute or chronic colon bleeding, colovesicle fistula, rectovaginal fistula, rectal fistulas, rectal prolapse, anal incontinence, warts, pruritus ani, rectal abscesses, hemorrhoids and other rectal conditions.

Emergency consultations and referrals; weekends and evenings.

Privileged at Baylor University Medical Center and Methodist Central Hospital.

214 821-4300, answered 24 hours and weekends
214 341-0859, residence

TMA Forum on Medical Issues

. . . Another service of your association

DERMATOLOGY

DAVID R. WEAKLEY, MD, FACP

Dermatology—Dermatological Surgery
Including Dermabrasion, Chemical Peeling
and Collagen Injections

Medical City Dallas, Suite 214, 7777 Forest Lane
Dallas, Texas 75230; Phone 214 661-7460

WILLIS I. COTTEL, MD

Mohs Surgery
Cutaneous Oncology
Dermatologic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960
Presbyterian III, 8230 Walnut Hill Lane
Suite 808, Dallas, Texas 75231

DERMATOLOGY ASSOCIATES OF SAN ANTONIO

James Lewis Pipkin, MD Mary Jo Montgomery, MD

Diseases of the Skin, Skin Cancer,
Mucocutaneous Virology

108 Tendick, San Antonio, Texas 78209; 512 222-8651, 222-2001
(East at 2700 block Broadway on Brackenridge Ave; up hill for 3 blocks to Tendick on left. Office in middle of block. Note signs and arrows.)

Dermatology Associates of Dallas
DAVID S. ALKEK, MD

Dermatologic Surgery and
Cosmetic Dermatologic Surgery

Hair Transplant, Dermabrasion, Chemical Peel,
Scar Revision, Lipo Injection and Sclerotherapy

Greenville Medical Tower, 7150 Greenville Ave., Suite 100,
L8-350, Dallas, Texas 75231; telephone 214 691-6999

MOHS SURGERY

For Primary and Recurrent
Cancer of the Skin

Forrest C. Brown, MD
Medical City Hospital
7777 Forest Lane, Dallas, Texas 75230; 214 661-4537

HERMANN SKIN DISEASE TREATMENT CENTER

Hermann Hospital, 6411 Fannin, Houston, Texas 77030; 713 792-5115
A comprehensive outpatient facility specializing in the treatment of psoriasis and other conditions requiring intensive topical care and ultraviolet light treatment.

Robert E. Jordon, MD
Medical Director, Hermann Skin Disease Treatment Center
Professor and Chairman, Department of Dermatology
University of Texas Medical School at Houston

DIAGNOSTIC RADIOLOGY

COMPUTED TOMOGRAPHY

Temple Independent Scanner

Stephen J. Vancura, MD
High Resolution In/Out Patient CT (Head or Body)
Including Tumor Biopsy, Interventional Radiology
2027 S. 61st St., Suite 116, Temple, Texas 76501
817 774-9994
Note: 24 hr. Emergency Services Available

ENDOCRINOLOGY

ENDOCRINE ASSOCIATES OF DALLAS, PA

Stanley Feld, MD, FACP
Richard Sachson, MD, FACP
Steven Dorfman, MD, FACP
Stephen Aronoff, MD, FACP
Diplomates of American Board of Internal Medicine
and Endocrinology and Metabolism

Practice Limited to Endocrinology & Diabetes

5480 LaSierra Drive, Dallas, Texas 75231; 214 363-5535

TMA Physician Placement Service
. . . Another service of your association

ERIC A. ORZECK, MD, FACP

Endocrinology & Diabetes

8181 North Stadium Drive, Houston, Texas 77054; 713 797-9922

ENDOCRINE CLINIC OF LUBBOCK

Jose R. Beceiro, MD, FACP
Diplomate of American Board of Internal Medicine and
Subspecialty Board in Endocrinology and Metabolism

Practice Limited to Endocrinology and Metabolism

2424 50th Street, Suite 304, Lubbock, Texas 79412; 806 791-5007

FAMILY PRACTICE

THE FAMILY MEDICAL CENTER

Katherine S. Henry, MD, PA
Michele D. Reynolds, MD
Diplomates, American Board of Family Practice

Providing comprehensive family medical care, gynecologic and surgical services, and internal medicine diagnostics.

721 W. Arapaho #2, Richardson, Texas 75080; 214 234-4776

GASTROENTEROLOGY

HERBERT A. BAILEY, MD

Diseases of the Digestive System

3434 Swiss Avenue, Suite 303, Dallas, Texas; 214 823-5180

GENERAL SURGERY

DRS. VANDERPOOL, LANE, WINTER & BONE

David Vanderpool, MD, FACS John W. Winter, MD, FACS
B. Ward Lane, MD, FACS G. Edward Bone, MD, FACS
Diplomates American Board of Surgery

General & Peripheral Vascular Surgery

1008 N. Washington, Dallas, Texas 75204; 214 823-2650
7777 Forest Lane, Suite 204, Dallas, Texas 75230; 214 661-7860

G. S. DOWDY, JR., MD, FACS

Diplomate American Board of Surgery

Special Interest Biliary Surgery

4126 S.W. Freeway, Suite 1620, Houston, Texas 77027; 713 961-4745

HAND SURGERY

L. LEE LANKFORD, MD

Diplomate American Board of Orthopaedic Surgery

DAVID J. ZEHR, MD—Microsurgery
ARNOLD V. DiBELLA, MD

Hand Surgery and
Upper Extremity Reconstructive Surgery

3600 Gaston Ave., Suite 450, Dallas, Texas 75246; 214 823-5351
LANKFORD HAND SURGERY ASSN.

ROBERT E. BUNATA, MD, PA
B. J. WROTEN, MD, PA

Surgery of the Hand

801 West Terrell, Ft. Worth, Texas 76104
Telephone 817 335-5411

W. DENNIS STRIPLING, MD, PA
MICHAEL V. DOYLE, MD, PA
Diplomates American Board of Orthopaedic Surgery
Hand Surgery and Reconstructive Surgery
of the Upper Extremity
8220 Walnut Hill Lane, Suite 606, Dallas, Texas 75231; 214 368-3776

KENNETH D. GLASS, MD, FACS
Hand Surgery and Reconstructive Surgery
of the Upper Extremity
St. Paul Professional Building, Suite 812, 5959 Harry Hines Blvd., Dallas, Texas 75235; 214 631-7488
Medical City Dallas, Suite C-200, 7777 Forest Lane, Dallas, Texas 75230; 214 661-4797

ADRIAN E. FLATT, MD, FRCS
Chief, Department of Orthopaedic Surgery
Baylor University Medical Center
Reconstructive Surgery of the Hand
Suite 412, Doctor's Building, 3707 Gaston Avenue, Dallas, Texas 75246; Office 214 823-9440

ROBERT A. ERSEK, MD
Diplomate of American Board of Plastic Surgery
Surgery of the Hand
30th & Red River, Austin, Texas 78704
24 HR# 512 474-HAND

WILLIAM J. VAN WYK, MD, PA
Surgery of the Hand
803 West Terrell, Fort Worth, Texas 76104
Telephone 817 877-3113

PHILLIP E. HANSEN, MD
ORTHOPEDIC ASSOCIATES OF DALLAS
Surgery of the Shoulder, Elbow & Hand
Microsurgery & Reimplantation
Baylor Medical Plaza, 3800 Gaston Ave., Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 8116, Dallas, Texas 75230; 214 661-7010

WEST HOUSTON HAND CENTER, PA
Neal R. Reisman, MD, FACS
Diplomate American Board Surgery
Diplomate American Board Plastic Surgery
Member American Society Surgery of the Hand
7515 S. Main, Suite 500, Houston 77030; 713 795-5353
12121 Richmond, Suite 211, Houston 77082; 713 558-5353
7777 S.W. Freeway, Suite 224, Houston 77074; 713 774-5353

HAND, MICROVASCULAR AND
REPLANTATION SERVICE
Treatment of traumatic and non-traumatic injuries of the hand and wrist, soft tissue problems of the upper extremity and reconstructive hand surgery.
David H. Hildreth, MD
Diplomate American Board of Orthopaedic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Orthopaedic Surgery
The University of Texas Medical School at Houston; 713 792-5994
Dennis P. Maher, MD
Diplomate American Board of Plastic Surgery
Co-director, Hand, Microvascular and Replantation Service
Hermann Hospital; Assistant Professor, Division of Plastic and Reconstructive Surgery
The University of Texas Medical School at Houston; 713 792-5473
For more information call 1-800-392-LIFE
6431 Fannin Street, Houston, Texas 77030

TMA Physician Health & Rehabilitation
Hotline 512 477-5575
. . . Another service of your association

NEUROLOGICAL SURGERY

DRS. LONG, SCOTT & COON
NEUROSURGERY ASSOCIATION
Neurological Surgery and Microneurosurgery
R. Gordon Long, MD, FACS
Bennie B. Scott, MD, FACS
John V. Coon, MD, FACS
Diplomates American Board of Neurological Surgery
Baylor Medical Plaza, 605 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246; Telephone 214 826-7060

DOCTORS SMITH, WHEELER AND PARKER, PA
Ronald Smith, MD, Retired
Joe Ellis Wheeler, MD
Leighton B. Parker, MD
920 South Lake, Fort Worth, Texas 76104
Telephone 817 336-0551

JACK E. McCALLUM, MD, PA
PHILIP C. BECHTEL, MD, PA
WARREN D. WILSON, MD, PA
Diplomates of the American Board of Neurological Surgery
1522 Cooper, Fort Worth, Texas 76104; 817 336-1300

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery and Microneurosurgery
Charles W. Simpson, MD
Morris Sanders, MD
Casey E. Patterson, MD (Retired)
W. Robert Hudgins, MD
Richard H. Jackson, MD
St. Paul Professional Bldg., 5959 Harry Hines Blvd., Suite 620, Dallas, Texas 75235; 214 637-0420
Presbyterian Professional Bldg., 8210 Walnut Hill Lane, Suite 905; Dallas, Texas 75231; 214 369-7596

ARLINGTON ASSOCIATION OF
NEUROLOGICAL SURGEONS
Neurological Surgery & Microneurosurgery
Lito Porto, MD
Jeffrey W. Heitkamp, MD
950 North Davis, Suite 1, Arlington, Texas 76012; 817 274-4593

NEUROLOGY

DIAGNOSTIC AFFILIATES
900 South Loop West, #100
Houston, Texas 77054
Electroencephalography
EEG service via telephone transmission to hospitals, clinics and private offices.
Meyer L. Proler, MD
Director: 713 747-0661

NUCLEAR MEDICINE

HERBERT C. ALLEN, MD, FACNM
Practice Limited to Nuclear Medicine
100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540
Diplomate American Board of Nuclear Medicine

TMA HealthWise Series
. . . Another service of your association

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology. Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., MD, FACNM
Director — 713 790-0540
Diplomate American Board of Nuclear Medicine

OCCUPATIONAL MEDICINE

ERIC G. COMSTOCK, MD

Diplomate, American Board of Medical Toxicology

Occupational and Environmental Toxicology

6910 Bellaire Blvd., Suite #12, Houston, Texas 77074
Phone 713 541-3214

OPHTHALMOLOGY

TEXAS RETINA ASSOCIATES

Albert Vaiser, MD
William B. Snyder, MD
William L. Hutton, MD
Dwain G. Fuller, MD
Gary Edd Fish, MD
Rand Spencer, MD
Bradley F. Jost, MD

Diseases and Surgery of the Retina and Vitreous

7150 Greenville Ave., Dallas, Texas 75231; 214 692-6941 or 800 872-2020
3600 Gaston Avenue, Dallas, Texas 75246; 214 821-4540

BRUCE C. TAYLOR, MD
RICHARD L. WINSLOW, MD

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E, Dallas, Texas 75204
214 521-1153; 1-800-442-5376

STUART A. TERRY, MD

Sub-Specialty Glaucoma

M&S Tower, Suite 401, 730 N. Main,
San Antonio, Texas 78205; 512 226-5191

TEXAS EYE INSTITUTE

Disease and Surgery of the Eye

Charles A. Sargent, MD
Alan C. Baum, MD
R. Edwin Pitts, MD
William L. Decker, MD
Gynette C. Master, MD

7777 Southwest Freeway, Suite 916, Houston, Texas 77074
713 777-7145

7647 Bellfort, Suite One, Houston, Texas 77061
713 644-2747

1111 Hwy 6, Suite 26, Sugar Land, Texas 77478
713 242-8841

12121 Richmond Ave., Suite 317, Houston, Texas 77082
713 556-5757

LOUIS M. ALPERN, MD, MPH, FACS, PA

Diplomate American Board of Ophthalmology

Diseases and Surgery of the Eye

2201 North Stanton, El Paso, Texas 79902; 915 545-2333

EDWIN C. AUGUSTAT, MD

Ophthalmic Plastic and Reconstructive Surgery

1400 South Main, Suite 503, Fort Worth, Texas 76104; 817 338-4183

RETINA-VITREOUS ASSOCIATES

W. Rex Hawkins, MD

Limited to Retina and Vitreous

1200 Binz, Suite 400, Houston, Texas 77004;
713 528-1122

HAROLD GRANEK, MD

Diseases and Surgery of the Retina and Vitreous

1021 Washington Avenue, Fort Worth, Texas 76104; 817 332-6200

HOUSTON EYE ASSOCIATES

Charles E. Russo, MD, FACS
Malcolm L. Mazow, MD, FACS
Robert H. Stewart, MD, FACS
Robert B. Wilkins, MD, FACS
Jeffrey D. Lanier, MD, FACS
Michael A. Bloome, MD, FACS
Paul C. Salmonsen, MD, FACS
Richard L. Kimbrough, MD, FACS
Jeffrey B. Arnoult, MD
Louise Cooley Kaldis, MD
William H. Quayle, MD
Sylvan Brandon, MD, FACS, FICS
Richard S. Ruiz, MD, FACS
Charles A. Garcia, MD, FACS
Jack T. Holladay, MD, FACS
Rosa A. Tang, MD
John M. Lim, MD, FACS
Whitney G. Sampson, MD, FACS
Lemuel M. Flanary, MD, FACS
L. Andrew Watkins, MD, FACS
John D. Goosey, MD, FACS
Antonio Aguirre, MD, FACS

Houston Eye Associates Building, 2855 Gramercy, Houston, Texas 77025; 713 668-6828

South Pennzoil Tower, 711 Louisiana, Houston, Texas 77002;
713 224-4433

Fountain View Medical Plaza, 1622 Fountain View, Houston, Texas 77057; 713 782-4406

Hermann Eye Center, 1203 Ross Sterling, Houston, Texas 77030;
713 797-1777

Heights Medical Eye Center, 535 West 20th Street, Houston, Texas 77008;
713 862-6631

JUDITH T. FEIGON, MD

Diseases and Surgery of the Retina and Vitreous

6410 Fannin, Suite 404, Houston, Texas 77030; 713 799-1737

ORTHOPEDIC SURGERY

L. Ray Lawson, MD
Robert D. Vandermeer, MD
Wynne M. Snoots, MD
R. Stephen Curtis, MD
William A. Bruck, MD
W. Z. Burkhead, Jr., MD
Richard D. Schubert, MD

W. B. CARRELL MEMORIAL CLINIC ASSOCIATED

Orthopedic Surgery
A Professional Association
2909 Lemmon Ave., Dallas, Texas 75204; 214 521-2191

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas; 817 335-4316

Louis J. Levy, MD, PA
Henry C. McDonald, Jr, MD
Fred W. Sanders, MD
James M. Beckley, MD
Joseph H. Gaines, MD
Steven J. Mackey, MD, PA
Stephen L. Brotherton, MD

TMA Physicians Benevolent Fund
. . . Another service of your association

F. Carlton Hodges, MD
J. Price Brock, Jr, MD

ORTHOPEDIC ASSOCIATES OF ABILENE

Diplomates American Board of Orthopedic Surgery

1701 Pine Street, Abilene, Texas 79601

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr, MD
Kenneth C. Scholz, DDS, MD
Robert A. Peinert, Jr, MD

3702 21st St., Suite 9, Lubbock, Texas 79410; 806 795-8261

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr, MD
E. E. Rising, Jr, MD, Emphasis on Hand Surgery
C. Poindexter, MD
C. R. Vavrin, MD, Emphasis on Sports Medicine
Diplomates American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76012; 817 261-8284

ORTHOPEDIC ASSOCIATES OF DALLAS

John B. Gunn, MD
Huntly G. Chapman, MD
Phillip E. Hansen, MD
James M. Lancaster, MD
James W. Brodsky, MD

Orthopedic Surgery

3600 Gaston Avenue, Suite 303, Dallas, Texas 75246; 214 823-7090
Medical City Dallas II, 7777 Forest Lane, Suite 2116,
Dallas, Texas 75230; 214 661-7010

ORTHOPEDIC FOOT SURGERY ASSOCIATES

Surgery & Diseases of the Foot and Ankle

Charles E. Graham, MD
8345 Walnut Hill Lane, Suite 105, Dallas 75231; 214 369-4361

Donald M. Mauldin, MD
6161 Harry Hines, Suite 220, Dallas 75235; 214 630-8646

ORTHOPAEDIC SURGERY ASSOCIATES OF SAN ANTONIO, PA

Ralph J. Curtis, MD
Jesse C. DeLee, MD
John A. Evans, MD

Athletic Medicine, Reconstructive and Traumatic Surgery of the Shoulder and Elbow, Hip, Knee and Foot

414 Navarro, Suite 1128, San Antonio, Texas 78205; 512 225-6045
7711 Louis Pasteur, Suite 209, San Antonio, Texas 78229; 512 697-9888

OTOLARYNGOLOGY

Drs. Morton, Blumenfeld & Charbonneau, PA

ENT, ENT Allergy, Cosmetic Facial Surgery

R.A.D. Morton, Jr, MD, FACS
Ronald J. Blumenfeld, MD, FACS
Paul A. Charbonneau, MD, FACS

Diplomates, American Board of Otolaryngology
1733 Curie, Suite 100, El Paso, Texas 79902; 915 533-5461
10470 Vista del sol, Suite 110, El Paso, Texas 79925; 915 592-8666

SAN ANTONIO HEAD & NECK SURGICAL ASSOCIATES, PA

Board Certified Otolaryngologists

Julius F. Marlowe, MD
Michael H. Bertino, MD
G. Paul Laursen, DDS, MD, FACS, FAAFPRS
Harry Schilling, MD
Stephen J. Talley, MD

ENT, Facial Plastic Surgery, Lipo-Suction

Madison Square Medical Building, Suite 304, 311 Camden, San Antonio, Texas 78215; 512 224-5481

Physicians' Plaza, Suite 370, 8038 Wurzbach Road, San Antonio, Texas 78229; 512 690-1326

TMA Memorial Library

. . . Another service of your association

PATHOLOGY

FORT WORTH PATHOLOGY LABORATORY

Dorothy Patras, MD, Director
John E. McDonald, MD

Anatomic Pathology and Consultation in Clinical Pathology

1425 Pennsylvania Avenue, Fort Worth, Texas 76104
Mailing address: P.O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

J. S. WILKENFELD, MD, MEDICAL LABORATORIES, INC.

J. S. Wilkenfeld, MD
Diplomate of the American Board of Pathology

Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008, Houston, Texas 77055; 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

PEDIATRIC HEMATOLOGY/ONCOLOGY

JAMES C. SHARP, MD

Pediatric Hematology/Oncology

Fellow, American Academy of Pediatrics
Board Certified, American Board of Pediatrics
Pediatric Hematology/Oncology

Practice Limited to the Diagnosis and Treatment of Cancer and Blood Disorders of Childhood

1313 Red River, Suite 106, Austin, Texas 78701

PHYSICAL MEDICINE & REHABILITATION

WARM SPRINGS REHABILITATION HOSPITAL GONZALES WARM SPRINGS FOUNDATION, INC.

P.O. Box 58, Gonzales, Texas 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade

David E. Gumper, Administrator
Larry E. Browne, MD, Medical Director

ROBERTO G. ROLFINI, MD

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

102 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205; Telephone 512 226-2424

THE INSTITUTE FOR REHABILITATION AND RESEARCH (TIRR)

In the Texas Medical Center, Houston, Texas

Comprehensive care hospital specializing in rehabilitation care for persons disabled by injury or disease. Inpatient and outpatient services.

Spinal Cord Injury	Polytrauma
Head Injury	Restorative Surgery
Amputee	Scoliosis
Stroke	Spina Bifida
Pediatric	Cerebral Palsy
Neurophysiology	Neuromuscular

Accredited by: Joint Commission on Accreditation of Hospitals
Commission on Accreditation of Rehabilitation Facilities

For referrals call 713-797-5922 or in Texas 1-800-44REHAB. Ask for the Patient Services Coordinator.

PLASTIC SURGERY

Thomas D. Cronin, MD, FACS
Raymond O. Brauer, MD, FACS
Thomas M. Biggs, MD, FACS
Laurence E. Wolf, MD, FACS
Benjamin E. Cohen, MD, FACS
Ernest D. Cronin, MD, FACS

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

7000 Fannin St., Suite 2400, Houston, Texas 77030; 713 795-5930

HOUSTON PLASTIC SURGERY ASSOCIATES

Simon Fredricks, MD, FACS
Jonathan J. Dora, MD, FACS
David J. Katrana, DDS, MD, FACS
James B. Stafford, IV, MD, FACS
David A. Lee, MD
John E. Lomax, MD

Aesthetic, Plastic, Reconstructive and Hand Surgery

6560 Fannin, Suite 750, Houston, Texas 77030; 713 795-5575

VALENTIN GRACIA, MD, FACS, FICS

Diplomate American Board of Plastic Surgery

Aesthetic Surgery—Burns

1001 W. Rosedale, P.O. Box 2476, Fort Worth, Texas 76113; B17 336-0446

FORT WORTH PLASTIC SURGERY CLINIC

David A. Grant, MD, FACS
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Aesthetic and Reconstructive Plastic Surgery

Raymond A. Faires, MD
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Larry E. Reaves, MD
Diplomate American Board of Surgery

Plastic and Reconstructive Surgery
Hand and Micro Surgery

606 Medical Plaza Building
B00 Eighth Avenue, Fort Worth, Texas 76104
817 335-4752 B17 332-9441 B17 335-4755

WILLIAM E. BARNES, MD

Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 3Bth Street, Suite 60B, Austin, Texas; 512 454-7659

JOHN E. CARTER, MD, PA

Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, Suite B01, San Antonio, Texas 7B229
Telephone: Office 512 696-2390; Medical Exchange 512 227-6331

PLASTIC SURGERY ASSOCIATION

Leonard Koch, MD

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410; B06 792-2313

STEPHEN C. LESAUVAGE, MD

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

825 Medical Drive, Tyler, Texas 75705; 214 593-B296

PLASTIC SURGERY CLINIC OF AUSTIN

Robert A. Ersek, MD, FAC5
Diplomate of American Board of Plastic Surgery

Aesthetics, Plastic, Reconstructive,
Suction Lipectomy, and Hand Surgery

30th & Red River, Austin, Texas 7B705
24 HR# 512 479-6B05 & 512 474-HAND

The Burn Care Associates has been organized to provide care for burned patients. Care for every phase of burn trauma will be provided from resuscitation to late rehabilitation.

John E. Carter, MD
Lebaron W. Dennis, MD
Michael M. Duffy, MD
Joe Ford, MD
David McInnis, MD
Donald Novick, MD
David Fisher, MD
Martin Smith, MD
Millie Smith, Coordinator

BURN CARE ASSOCIATES

302 Oak Hills Building, Louis Pasteur Drive, San Antonio, Texas 7B229
Telephone S12 694-0973

ROBERT M. WRIGHT, JR, MD
VALERIE WRIGHT, MD

Plastic, Reconstructive, Hand
and Microvascular Surgery

1700 Providence Drive, Waco, Texas 76707
Telephone B17 756-0111

ROGER D. HARMAN, MD

Diplomate American Board of Plastic Surgery

Aesthetic, Plastic and Reconstructive Surgery
Hand and Microsurgery

747 Eighth Avenue, Fort Worth, Texas 76104
817 335-4044

PLASTIC SURGERY SPECIALISTS

Excellence in Form & Function
Neal R. Reisman, MD, FACS
William B. Riley, Jr., MD, FACS
Richard K. Vanik, MD
Diplomates American Board Plastic Surgery
West Houston Doctors Center, 12121 Richmond, Suite 211, Houston, Texas 770B2; 713 558-5353
Greenpark, Memorial Health Center/5ugar Land, Memorial 5outhwest Professional Building, The Houstonian

SAEED BEG, MD, PA

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive Surgery, Hand Surgery

2602 Texas Drive, Irving, Texas 75062
Phone 214 25B-0025

PSYCHIATRY

RICHARD G. JAECKLE, MD

Psychiatry

Diplomate, ABPN: Psychiatry
Diplomate, ABPN: Child-Adolescent

Presbyterian Professional Building II, Suite 404,
B220 Walnut Hill Lane, Dallas, Texas 75231; 214 696-0964

TIMBERLAWN PSYCHIATRIC HOSPITAL

Inpatient and Outpatient Services for Child,
Adolescent and Adult Psychiatry

Jerry M. Lewis, MD
Doyle I. Carson, MD
Keith H. Johansen, MD
James K. Peden, MD
Charles G. Markward, MD
Byron L. Howard, MD
Roy H. Fanoni, MD
Mark P. Unterberg, MD
John G. Looney, MD
Kathleen B. Erdman, MD
Don C. Payne, MD
Mark J. Blotcky, MD
L. Dwight Holden, MD
Paul M. Hamilton, MD
Jerry M. Lewis, III, MD
Tom G. Campbell, MD
Jeffrey Glass, MD
Grover M. Lawlis, MD
Conway McDanald, MD
Gary L. Malone, MD
Edgar P. Nace, MD
Ernest N. Brownlee, MD
Michael Madigan, MD
Perry Talkington, MD
Joseph D. Gaspari, MD

4600 Samuell Blvd., Dallas, Texas 75228
214 3B1-71B1

GONZALO A. AILLON, MD

Psychiatry-Bilingual

3450 Wheatland Road, Suite 120
Dallas, Texas 75211: 214 296-6241

TMA Physician Membership Directory
. . . Another service of your association

C. MARSHALL BRADSHAW, MD, PA

Psychiatry, Somatic Therapies
Clinical Electroencephalography

Suite 722, 1550 W. Rosedale, Fort Worth, Texas 76104
Telephone B17 335-9409

DALLAS PSYCHIATRIC ASSOCIATES

A Partnership
Telephone 214 247-1150 Answered 24 Hours

Inpatient and Outpatient Services for
Adult, Adolescent, and Child Psychiatry

Inpatient and Outpatient Services for
Treatment of Alcoholism and Drug Abuse

Larrie W. Arnold, MD
Gary L. Etter, MD
Ronald Fleischmann, MD
Bradford M. Goff, MD
Fred L. Griffin, MD
Joan R. Hebeler, MD
Cheryl Heidelberger, MD
R. Sanford Kiser, MD
Philip Korenman, MD
Grover Lawlis, MD
Gretchen Megowen, MD
Art Mirzatuny, MD
John L. Peake, MD
William M. Pederson, MD
Leslie H. Secrest, MD
Dawn Shogren, MD
Angela M. Wood, MD
John M. Zimburean, MD

Brookhaven Psychiatric Pavilion, LBJ at Webbs Chapel
10 Medical Parkway, Suite 304, Dallas, Texas 75234

Medical City Dallas, 7777 Forest Lane, Suite B411,
Dallas, Texas 75230

Trinity Professional Plaza, 4333 N. Josey Lane, Suite 307,
Carrollton, Texas 75010

PULMONARY DISEASES

PULMONARY CONSULTANTS OF TEXAS, PA

John R. Burk, MD, FACP
David M. Webb, MD, FCCP
R. L. "Lin" Cash, Jr., MD
David R. Stoop, MD, FACP, FCCP
Mitchell C. Kuppinger, MD, FCCP
David H. Plump, MD, FCCP
W. Steven Trombold, MD, FCCP

1307 Eighth Avenue, Suite 201,
Fort Worth, Texas 76104; B17 926-0242

911-C Medical Centre Drive
Arlington, Texas 76012;
B17 461-0201 (Metro)

Diplomates of American Board of Internal Medicine

Physiology, Diagnosis, Therapy, Bronchoscopy, Pulmonary Function, Intensive Care, Endobronchoscopic Laser, Pulmonary Rehabilitation, Sleep Apnea, Reactive Airway Disease

RADIATION ONCOLOGY

RADIATION ONCOLOGY AT MEMORIAL SOUTHWEST HOSPITAL, HOUSTON

Radiotherapy Department
7600 Beechnut
Houston, Texas 77074

713 776-5622 Day Phone
713 776-5170 Night and Weekends

Carlos H. Fernandez, MD
Diplomate American Board of Therapeutic Radiology

Practice Limited to Radiation Oncology
External or Internal Irradiation
Inpatient and Outpatient Services

TMA Action monthly newsletter

. . . Another service of your association

RHEUMATOLOGY

DON E. CHEATUM, MD, FACP, FCCP

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204; 214 823-4151

THORACIC SURGERY

ALLAN L. GRAHAM, MD, FACS*
KARAMAT U. CHOUDHRY, MD, FACS
ROBERT W. MILEY, MD, FACS
RICHARD L. SHEPHERD, MD, FACS

Diplomates American Board of Surgery and Board of Thoracic Surgery
*Also certificate of special qualification in general vascular surgery, American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
515 South Adams, Fort Worth, Texas 76104; B17 332-7878

RICHARD E. WOOD, MD
ROBERT E. RAWITSCHER, MD
THOMAS P. MEYERS, MD

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

UROLOGY

THE UROLOGY CLINIC

Dolphus E. Compere, MD
Grant F. Begley, MD
Hugh Lamensdorf, MD
Ira N. Hollander, MD
J. Daniel Johnson, MD
A. E. Thurman, MD

Diplomates of American Board of Urology

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
B17 336-5711

EUGENE R. TODD, MD, PA

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3600 Gaston Avenue, Baylor Medical Center Plaza,
Wadley Tower, Suite 755, Dallas, Texas 75246
214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, MD, PA
Donald J. Logan, MD, PA
Donald L. McKay, MD, PA
Christopher D. Fetner, MD, PA

Diplomates of American Board of Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

KIRBY B. TARRY, MD, FACS

Diplomate, American Board of Urology

Adult and Pediatric Urology
Impotence with Prosthesis-Vasovasostomy

1405 West Illinois, Midland, Texas 79701
915 687-4553

SOUTHWEST UROLOGY ASSOCIATES

Adult and Pediatric Urology

Ted Boone, MD
Warren M. Greene, MD
James T. Coggins, MD
Wm. A. Freeborn, MD
H. Pat Hezmall, MD
Kenneth I. Licker, MD

Diplomates of American Board of Urology

221 W. Colorado, #440, Dallas, Texas 75208; 214 948-3101
3450 W. Wheatland Road, #60, Dallas, Texas 75211

C. F. SKRIPKA, JR, MD, FACS

Urology, Andrology & Neurourology

1101 North 19th, Suite 114, Abilene, Texas 79601
915 673-5726

Texas Medical Association Member Services

Membership in the Texas Medical Association reflects the importance that you place on providing the highest quality of health care to the people of Texas. But membership in TMA also directly benefits you through TMA member service programs. All TMA member service programs are thoroughly evaluated and carefully monitored so that you are assured of receiving the highest quality programs for a very competitive price. The TMA member service programs can save you many times over your annual dues amount and make a big difference to your "bottom line."

Practice Enhancement Programs

Group Insurance Programs

Medical Equipment Leasing Program

Discount Credit Card Program for Patient Use

Medical Market Analysis Demographic Profile

Practice Management Workshops

Discount Magazine Program

I.C. System Collection Program

Physician's Placement Service

Personal Services

InterFirst Bank-Dallas Line-of-Credit Program

Discount Automobile Purchase/Lease Program

Gold MasterCard Program

Avis Rent-A-Car Program

Reduced Rates at InterContinental Hotels

For information on these member service programs, please contact the Member Services Department at 512 477-6704.

Classified Advertising

OPPORTUNITIES AVAILABLE

Academic/Government

Physician/Medical Director—Full time family practice physician needed for a community/migrant health center. Experience in medical administration as well as clinical experience helpful. Board eligible or certified with Texas licensure preferred. Emphasis is on comprehensive ambulatory care, including OB care. Hospital in-patient care of registered patients required. The facility is located in a very pleasant rural community 85 miles southwest of San Antonio, Texas. Very competitive salary. Send CV or resume with references to Rachel A. Gonzales, Executive Director, Uvalde County Clinic, Inc., 1009 Garnerfield Road, Uvalde, Texas 78801.

Internist—Veterans Administration Outpatient Clinic, Lubbock, Texas has vacancy for staff internist. Clinic hours 8:00 am to 4:30 pm, five days week. Contact Dr. Claude Ricks, 806 743-7216.

Physician, MD, City of Houston—The City of Houston is seeking a physician to work in a Public Health Care Center. Experience and/or interest in the following areas is preferred: Diagnostic Examinations, Family Planning, Maternity (prenatal care only, no delivery), Well Child Development. Physicians with medical degrees from accredited medical school with valid license to practice medicine in Texas should apply to Tom Anger, Personnel Department, City of Houston, P.O. Box 1562, Houston, Texas 77251.

Public Health Residency Position Available—The Texas Department of Health will appoint a qualified applicant to a one-year program of PRACTICUM (PGY-3) training in public health beginning in January of 1988, and another in June of 1988. Applicants must be graduated with an MD or DO from a US or other fully accredited school of medicine and must have at least one year of certified clinical training, a Master's Degree in Public Health (or equivalent), US citizenship or permanent visa, and an unrestricted license to practice medicine in Texas. Contact Charlies R. Webb, Jr., MD, (PHR-1), Texas Department of Health, 1100 West 49th Street, Austin, Texas 78756. Telephone inquiries to Dr. Webb may be made by calling 817 778-6744.

Emergency Medicine

Needed: Emergency physicians, North Central Texas area, full and part-time. For an application call 817 336-8600 or write Emergency Medicine Consultants, PA, 1533 Merrimac Circle, Suite 202, Fort Worth, Texas 76107.

Emergency Physician—Local Houston ER group needs experienced ER physician. Fee-for-service with guarantee. Contact Greater Houston Emergency Physicians Associates, P.O. Box 7445, Houston, Texas 77248; 713 861-7942.

Texas: Dallas-Fort Worth & East Texas. Full-time positions available at several hospitals in the Dallas-Fort Worth and East Texas areas, with extremely attractive fee-for-service compensation and hourly guarantees. Compensation ranges from $65,000 to $105,000 annually. Very desirable geographic locations include Tyler, Longview, Greenville and Marshall, Texas. Association with a strong physician-oriented group provides attractive professional opportunities for emergency physicians. Positions are also available for primary care physicians in clinic settings. Contact Brenda Lancaster, Vice President, Professional Services, EmCare, Inc., 3310 Live Oak, Suite 400, Dallas, Texas 75204, or call toll free 1-800-527-2145.

Texas: Emergency Department locum tenens and weekend coverage available in various locations. Competitive hourly rate includes malpractice insurance. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 29, Traverse City, MI 49684; 1-800-253-1795.

Texas, Houston—Full-time emergency center positions now available. Opportunity for career-minded emergency physicians to join a physician's association staffing the Memorial Hospital System. Physician compensation is based on fee-for-service which provides excellent remuneration. Board-certified or board-prepared applicants send your CV to Houston Emergency Physicians Associates, 9100 Southwest Freeway, Suite 200, Houston, Texas 77074 or call 713 776-1081.

San Angelo—Outstanding opportunity in minor emergency/family practice clinics. Guaranteed $100,000 for 4-day week 13 hr. days), 50 weeks/year. Profit sharing above guarantee. Contact Wayne Williams, MD, 915 942-8611, Shamrock Clinics, 4208 College Hills, San Angelo, Texas 76904.

Texas—Full-time ED positions available in North Texas area. Small group, flexible scheduling. ACLS and US education required. Send CV to Ms. Neu, Numed Systems, P.O. Box 2122, Denton, Texas 76202.

Texas, Weslaco—Full time position available at a Valley emergency department. Enjoy border shopping and beaches. Volume 13,000/year. $80,000-$100,000/year. Contact: Helen Meyer, 8700 Crownhill Rd., Suite 600, San Antonio, Texas 78209; 512 822-9811.

Texas, Austin—Needed physicians part-time, weekends and occasionally weekdays to staff free standing urgent care center. Remuneration commensurate with experience. Send CV and application request to Matthew A. Vail, MD, Medical Director, Austin Medicenter, 6343 Cameron Road, Austin, Texas 78723.

Family/General Practice

Family/general practitioners needed to become associated with our rural hospitals located in or near scenic Texas Hill Country. Independent fee-for-service practices with financial guarantees. Hospitals are owned by HealthStar Corporation. HealthStar operates five rural hospitals in Texas. Please send CV or call: Physician Relations, HealthStar Corporation, 3555 Timmons Lane, Suite 700, Houston, Texas 77027; 713 627-2145.

Reagan Hospital District, Big Lake, Texas is looking for a physician interested in solo family practice that promises lucrative future. Located in Permian Basin, Reagan Hospital District is prepared to offer $125,000 gross annual guarantee with new clinic opening July 1987. Reagan Hospital District owns-operates a 27-bed acute care hospital and 48-bed long term care facility in community of 3,500. Contact Ron Galloway, Administrator, Reagan Memorial Hospital, 805 North Main, Big Lake, Texas 76932; 915 884-2561.

Family practice physician for 10-member multi-specialty group located in the Rio Grande Valley. Clinic has six family practice physicians. Contact Tom LaMotte, Executive Director, San Benito Medical Associates, Inc., P.O. Box 642, San Benito, Texas 78586; 512 399-2443.

Family practice physician (BC/BE) to associate with established FP in clinic in small, scenic Hill Country town near San Antonio. Primarily ambulatory/emergency practice with some surgery. Salary plus incentive. Partnership possible. J. E. McCoy, MD, 120 Medical Drive, Boerne, Texas 78006; 512 249-9307.

Raise your family in a friendly small town with the convenience of a large city just 30 miles away. Excellent schools. New hospital and new clinic needs a family practice physician interested in practicing medicine in West Texas. Contact Charles Butts, Administrator, Crane Memorial Hospital, 1310 S. Alford, Crane, Texas 79731; 915 558-3555.

prn, ltd.
physician staffing

We put together
"temporary solutions"
and "lasting relationships"

locum tenens & permanent placements

1-800-531-1122
1000 N. Walnut (Suite A)
New Braunfels, Texas 78130

San Antonio Vicinity—Seeking board certified FP desiring full range of family medicine, including OB. Modern hospital, new office space adjacent to hospital. No evening or weekend ER call required. Share call with young, BC FP. Excellent incentive package. Hunting mecca. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Family Physician—(BC, BE) to join established family clinic in the beautiful area of East Texas. Quality of life is excellent. Good practice opportunity with above average financial package. Send CV to Jerry Chapman, Glenwood Clinic, 1400 College Drive, Texarkana, Texas 75503; 214 793-5671.

Dallas Area—Immediate need for recently trained BC FP to associate with 21-person multispecialty group. Shared call. No OB. Modern, 90-bed hospital adjacent to professional office building. Competitive salary plus benefits, early association. For information without obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Small FP group seeks recently trained, BC associate for practice in Panhandle community of 25,000 (service area population 75,000). Modern hospital. Competitive incentive package. Many area amenities. Easy access to Amarillo and airport. For information, without cost or obligation, please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Northeast Texas—Near D/FW Metroplex. Immediate need for BE/BC family physicians in rural communities. Solo with coverage or associate practice. Modern hospitals. Many lakes and recreational activities. Easy access to amenities of Dallas/Fort Worth. Incentive package. Please contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Family practice and obstetrician-gynecologist, board certified or eligible. Multispecialty group. Surrounding population 30,000. Excellent first year guarantee plus bonus with fringe benefits. Partnership in one year; token buy-in. Contact John M. Johnson, MD, Family Diagnostic Medical Center, 101 Circle Drive, Hillsboro, Texas 76645. Phone number 817 582-3401.

Family practitioner needed for busy, well-established primary care practice. Join two family physicians in Lubbock, Texas. Terms are negotiable. Please send curriculum vitae to Maureen Bragg, Summit Health Ltd., 1800 Avenue of the Stars, Suite 1200, Los Angeles, California 90057, or call (collect) at 213 201-4000.

Lavaca Medical Center, Hallettsville, Texas is looking for a physician interested in a solo family practice or possibly practicing with an already established associate. Financial assistance and benefit package available. Lavaca Medical Center is a modern well equipped 33-bed general acute care hospital centrally located between Houston, San Antonio and Austin. Professional building adjacent to hospital has immediate office space available. Contact James Vanek, Administrator, Lavaca Medical Center, 1400 North Texana Street, Hallettsville, Texas 77964; 512 798-3671.

Family/General Practice—Immediate opportunity to join a rapidly growing practice in Southeast Dallas. Very attractive clinic across the street from hospital. Contact Robert N. Silva, MD; 214 391-1158.

Family physician wanted to associate with family physician in a rural town located 85 miles south of Midland-Odessa. Excellent professional and financial opportunity. Contact Paul Harper, Administrator, Iraan General Hospital, P.O. Box 665, Iraan, Texas 79744; 915 639-2871.

Family Practice Physician

Established private practice opportunities (non-HMO) in and around metropolitan Houston:

- Competitive guaranteed income
- First year bonus
- Partnership offering after 12 months
- Complete benefit package
- CME funding

Board certified or board eligable candidates send C.V., copy of diploma, licensure, registration, board certifications and malpractice insurance to:

Park Avenue Private Physicians
2500 Citywest Blvd., Suite 300
Houston, Texas 77042

Inquire to Brenda Helm, Executive Coordinator, (713) 781-3055

Internal Medicine

Progressive Central Texas community of 5,600 (within one hour of Austin) seeks 8E/8C general internist. Modern hospital; competitive incentive package including income guarantee, professional office space, etc. Award winning schools. Excellent lifestyle in family-oriented community; good economy. Contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 595-1128.

Austin Vicinity—Busy internal medicine practice available in popular community. Fourway shared call coverage. Established practice with proven capability to generate lucrative income in a desirable community offering an excellent lifestyle. Includes all equipment and furnishings. Reasonable price and terms. Contact Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 595-1128.

Internist: Strong interest in cardiology for 2SK southeast Texas community. Many outdoor/recreational amenities with access to metro city. Compensation/benefits package: $100K+ minimum guarantee plus percentage, malpractice, office space built to specifications, CME allowance, relocation. Solo or single specialty group. Contact 8obby Sweat, Tyler & Company, 9040 Roswell Road, Atlanta, Georgia 30350. Call 404 641-6411.

Obstetrics/Gynecology

OBG—North Central Texas. Seeking 8C/8E OBG to join expanding O8G practice in multispecialty group. Modern clinic adjacent hospital. Near beautiful lakes and parks within 45 minutes Dallas/Fort Worth Metroplex. Salary with progress to partnership. Excellent benefits. Contact Richard Hoefelmann, MD, Surgery Associates, PA, 218 SW 26th Avenue, Mineral Wells, Texas 76067; 817 325-0741.

Fort Worth Vicinity—Immediate need for 8E/8C O8G. Attractive, affluent community; strong economy. Recreational mecca. Modern hospital. Share call with young, American-trained, 8C O8G. Competitive incentive package. Easy access to D/FW. For information, without cost or obligation, contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 59S-1128.

Dallas—OBG office, 1,500 sq. ft. newly finished out. Fully equipped. Active O8G practice, gross $2S0-$300K/year. For sale-lease, very flexible terms available. This is a turnkey opportunity. Call evenings 214 221-4055 or write O8 Associates, 309 Tanglewood, Lewisville, Texas 7S067.

Orthopedic Surgery

Wanted—Board qualified orthopedic surgeon with training in hand surgery to work in orthopedic group in West Texas city. Ultimate full partnership planned. Medical school affiliation possible. 806 799-1380.

Orthopedic Surgeon—Immediate need for 8E/BC physician to serve two adjacent Central Texas communities. Group or solo with call coverage. Modern hospital equipment and facilities. Competitive incentive package, including income guarantee, offce space, etc. Progressive communities. Great schools. Contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 59S-1128.

Pediatrics

Pediatrician, Brownsville, Texas—Vacation area near the ocean and Mexico. Enjoy practice in a modern, spacious, custom built clinic with lab, x-ray. Pleasant hours, good beginning salary. Contact Adele 8romiley, MD, 2335 Central 8lvd., 8rownsville, Texas 78S20; 512 S46-3126.

Dallas Area—Established general pediatric practice for sale. Grossing in excess of $270,000 per year. Shared call coverage. Includes all equipment and furnishings. Reasonable price and terms. Across street from modern hospital. For information without cost or obligation contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 S9S-1128.

Radiology

Diagnostic Radiologist—Immediate need for recently trained, 8C physician to associate with established radiology group serving regional medical center. All modalities, including MRI and interventional radiology. Family-oriented community; strong economy. Easy access to D/FW. Excellent incentive package; early partnership. Contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 S95-1128.

Immediate need for BE/BC diagnostic radiologist in northeast Texas community of 2S,000, near D/FW Metroplex. Modern 150-bed hospital. All modalities except MRI. Strong economy, family oriented community. Many lakes and recreational activities. Incentive package. Please contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 595-1128.

Other Opportunities

Are you looking for a paved highway toward financial success—where you will receive referrals from other doctors because they are too busy or retiring—where there is no animosity towards new physicians? Immediate openings for family physicians, O8G, internists, pedis, orthopods, and surgeons in smaller towns in Texas. Contact Texas Doctors Group, 702 Colorado, Suite 102, Austin, Texas 78701; 512 476-7129.

Sunbelt—Our clients seek physicians of all disciplines throughout the sun country. For more information call or send CV to Joyce Staffel, Medical Division, JSI, 3200 Wilcrest, Suite 130, Houston, Texas 77042. Phone 713 782-047S.

Immediate Opening: Excellent opportunity for a specialist in FP, O8G, IM, general surgery or industrial medicine to join well established and rapidly expanding family practice group in San Antonio. Our facility is fully equipped as a total health care center with laboratory, x-ray, stress testing, holter monitoring, and pulmonary function testing already established. Plans are underway to move to larger facility and offer increased services. We offer competitive guaranteed salary, corporate benefits with paid professional liability, administrative and support staff, affiliation with large community hospitals, and call sharing opportunities. Requires well-rounded abilities in both an outpatient and hospital practice. 8oard certification or eligibility required. Dedication to high quality, excellent patient empathy and communicative skills mandatory. Leadership skills and entrepreneural interest in practice desirable. Tremendous growth potential. Immediate opening due to building expansion and broadening patient base. Send CV, references to William Gonzaba, MD, PA, Gonzaba Medical Group, 720 Pleasanton Road, San Antonio, Texas 78214.

Positions Available—Seeking BC/BE, general internist, HEM/ON, PS, endocrinologist to join an established multispecialty (non-prepaid) clinic in South Central Texas. Contact Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 7820S.

Physicians—Have you contacted the Texas Medical Association Placement Service? We have information for many specialties on practice opportunities throughout the state. Send inquiries to Physicians Placement Service, Texas Medical Association, 1801 North Lamar 8lvd., Austin, Texas 78701. Call S12 477-6704, ext. 263. No charge to TMA members!

South Texas (Upper Rio Grande Valley) excellent and immediate opportunity for 8C or 8E physicians in the following specialties: urology and orthopedics. A 106-bed, JCAH accredited hospital seeks these specialties. This Rio Grande Valley community which is located within 10 minutes of the Texas-Mexico border and one hour from South Padre Island resort provides an excellent opportunity for these physicians. Pan American University located within city. Send CV to Dora Valverde, Interim Chief Executive Officer, Edinburg General Hospital, P.O. 8ox 2000, Edinburg, Texas 78539; 512 383-1481.

Arizona-based physician recruitment firm has quality opportunities coast to coast. Available positions in most primary care and surgical specialties to include O8G, orthopedics, ER, and ENT. "Quality Physicians for Quality Clients since 1972." Call 602 990-8080; or send CV to Mitchell & Associates, Inc., P.O. 8ox 1804, Scottsdale, Arizona 85252.

Full and part-time experienced physicians for established and expanding family care clinic in Northwest Houston. Excellent remuneration and working conditions; flexible scheduling. Contact Director, Medical Center, 7925 FM 1960 West, Houston, Texas 77070; 713 469-4560.

Expanding 20-physician multispecialty group has excellent opportunity for the following specialists: family practitioner, pediatrician, O8G, orthopaedic surgeon, and dermatologist. High beginning guaranteed salary in addition to benefits with no first year expenses. Send CV to Doyle Lamb, Administrator, Malone and Hogan Clinic, 1501 West 11th Place, 8ig Spring, Texas 79720.

Great Texas Opportunities—Substantial income guarantees, free office space, MP insurance paid. Large cities, suburbs, large-small towns. FPs, O8Gs, PDs, IMs, N5s, GPs. Call or send CV to Nancy McEntire, CPC or Ray Carter, McEntire Carter Associates, 9500 Jollyville Road, #142, Austin, Texas 787S9; S12 345-7327.

Otolaryngologist—Immediate opportunity for 8E/8C physician in Northeast Texas community of 27,000 (service area pop. 150,000) regional medical center. Quality lifestyle in area with strong economy; easy access to D/FW Metroplex. Shared call coverage; incentive package available. Contact: Physician Resource Network, P.O. 8ox 37102, Fort Worth, Texas 76117; 817 59S-1128.

Neurosurgeon—Immediate opportunity for 8E/8C physician with regional medical center in Northeast Texas (service area population 1S0,000). State-of-the-art technology available; large referral base. Quality lifestyle in a community with strong economy; easy access to D/FW Metroplex. Incentive package. Contact: Physician Resource Network, P.O. Box 37102, Fort Worth, Texas 76117; 817 595-1128.

Wanted—A few good physicians (O8G, family practice, internal medicine, general surgery, and orthopedics) for select locations in Central Texas communities. Competitive physician assistance packages available for private practice opportunities. Call Johnny 8urns, Senior Vice President, HealthStar Corporation, 3555 Timmons, Suite 700, Houston, Texas 77027; 1-800-627-2145 or 713 627-214S.

Cardiologist—Invasive/non-invasive 8C/8E to join two 8C cardiologists located in southwest Houston. Good salary, fringe benefits, partnership after two years. Send CV to P. McKenzie, 1919 Land Mark, Richmond, Texas 77469.

Gastroenterologist—Immediate practice opportunity available in beautiful and vivacious Nacogdoches. County population in excess of 50,000 in the Piney Woods of East Texas. Assistance is available for establishing a practice. If interested, contact Kenneth Worley at 409 564-4611.

Pulmonologist—Immediate practice opportunity available in beautiful and vivacious Nacogdoches. County population in excess of 50,000 in the Piney Woods of East Texas. Assistance is available for establishing a practice. If interested, contact Kenneth Worley at 409 564-4611.

Prosperous, expanding multispecialty group in choice rural area of Central Texas is seeking an additional general surgeon. Salary with incentive bonus opportunity. Excellent benefits. Independent fee-for-service 22 physician group with drawing area of 100,000 plus. Send CV to William Schlotter, Brenham Clinic Association, PA, 600 N. Park, 8renham, Texas 77833.

Provide medical services to patients including pediatrics, O8G, minor surgery, geriatrics and internal medicine. Comprehensive medical services for members of family on continuing basis. Examine patients, elicit and record information about patients' health, order or execute various tests and x-rays on patients' condition. Analyze, report and diagnose condition, administer treatments and medications. Vaccinate patents to immunize them from communicative diseases. Refer patients to specialists when necessary. Must have MD degree in medicine, one year internship and two years experience. Will work 40 hours a week from 8 am to 5 pm Monday through Friday. Salary $50,000 per year. Apply at the Texas Employment Commission, Pasadena, Texas or send resume to Texas Employment Commission, TEC 8uilding, 1117 Trinity Street, Austin, Texas 78778. J.O. #4794263. Ad paid for by an equal employment opportunity employer.

Invasive Cardiologist—A practice opportunity is available in beautiful vivacious Nacogdoches. County population in excess of S0,000 in the Piney Woods of East Texas. Assistance is available for establishing a practice. If interested, contact Kenneth Worley at 409 564-4611.

Psychiatrist—New position in expanding medical services division of a community mental health center. Requires board eligible or board certified and Texas license. Entry level salary up to $72,304 depending on qualifications; higher salary negotiable, depending upon experience/credentials. Fringe benefit package of 21% plus administrative and malpractice liability coverage. El Paso is a culturally diverse major metropolitan area with a population over 500,000 and with an unsurpassed climate. 8ilingual Spanish/English preferred but not required. For more information, call or write W. M. Smith, Personnel Director, Life Management Center, P.O. 8ox 9997, El Paso, Texas 79990; 91S S94-1069.

Pharmaco Dynamics Research, Inc., an innovative clinical research company, providing comprehensive services for clinical evaluations of pharmaceutical agents and medical devices, is currently seeking a MD to join our staff as a Medical Director/Director of Phase I Clinical Pharmacology Unit. Applicants must possess clinical research experience and excellent interpersonal and decision making skills. Specific responsibilties include: performing physical examinations, supervising dosing of investigational drugs, providing on-call consultation for studies, serving as principal investigator and/or medical supervisor for Phases I-IV clinical investigational studies. Pharmaco offers a competitive salary, generous benefits package and a superb working environment in a new 43,000 square foot clinical research facility which houses the largest (138 beds) Phase I clinical pharmacology unit under one roof in the US. Qualified individuals are invited to submit curriculum vitae in strict confidence to: Rick Hawkins, President, Pharmaco, Two Park Place, 4009 8anister Lane, Austin, Texas 78704.

Medical oncologist needed to work for another physician to diagnose and treat malignant lesions of patients with emphasis on head and neck cancer. Examine internal structures and functions of organ systems, making correlation of x-ray findings with other exams and tests. Physician will establish protocol, design and diagnoses of treatment for patients. Treat malignant internal and external growths by exposure to radiation from x-rays, high energy sources, and natural and man-made radioisotopes directed at or implanted in affected areas of body.

Must have MD diploma, five years training in internal medicine and oncology and one year experience. Must have Texas license and be board certified in internal medicine. Salary $55,000 per year, 40 hours per week, Monday through Friday, 8 am to 5 pm. Apply at the Texas Employment Commission, Beaumont, Texas or send resume to Texas Employment Commission, TEC Building, 1117 Trinity Street, Austin, Texas, J.O. #4793477. Ad paid for by an equal employment opportunity employer.

Physicians

Expanding Career Opportunities

Residencies, Fellowship, experienced Physicians Our 15 years of physician recruitment experience can save you time and provide you valuoble information.

Excellent Opportunities available nationally in Coostal, Metro, Suburb and Smoll Community oreas, for all Speciolties, Solo, Group, Partnerships, HMO & Multi Specialties. Guarantees, Solories, Office Space, Expenses Paid.

For confidential consultatian coll or write:

Mike Jenkins
Richard, Wayne & Roberts
Physician Recruitment
24 Greenway Plaza, Suite 1304
Houston, TX 77046
713-629-6681
1-800-345-2413 (outside of Texas)

OPPORTUNITIES SOUGHT

We have listings of physicians desiring to relocate in Texas. Nearly all specialties are represented. There is no charge to TMA members for this service. Contact: Physicians Placement Service, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701. 512 477-6704, ext. 263.

53-y/o American-born and trained FP with stable background in private practice and industrial medicine, seeks solid practice opportunity. Open to setting. No O8 or surgery. Prefer small town near metropolitan area (family in Houston). Please reply to Ad-680, TEXAS MEDICINE, 1801 North Lamar 8lvd., Austin, Texas 78701.

Board eligible internist completing residency seeks position in the Houston area, available August 88. Will consider group practice or associate practice. Please reply to Ad-682, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

OBG—US graduate with Texas residency in OBG. 8oard certified and fellow in ACOG with 14 years experience seeking a practice locale. Prefer association or partnership with other OBG or clinic with coverage. Contact Dick Cunningham, MD after 6 pm, 713 376-9062.

FOR SALE OR LEASE

Medical Equipment

50% off previously owned medical, laboratory, x-ray, ultrasound equipment. We buy, sell, broker, repair. Medical Equipment Resale & Repair, Inc., 24026 Haggerty Road, Farmington Hills, Michigan 48018. 1-800-247-5826 or 313 477-6880.

Save $$$ on your medical equipment needs!!! Autoclaves to x-rays . . . complete setups to single items. If we don't have it, we can usually locate it. 5ave more than 50% on most items. All equipment guaranteed, and delivery available to any location. We sell, broker, repair and buy. Call or write for any information and/or our complete warehouse inventory list. Medexchange, P.O. Box 18164, Dallas, Texas 75218; 214 369-3960; Metro 229-9253.

Picker Echoview 80-L articulated arm gray scale ultrasound unit, $4000 or best offer. Call 817 778-2595, Temple, Texas.

Doctor, you can't beat the quality or the price! Holter Monitor Scanning 5ervice. Physician owned, trained, and supervised. Now using UP Service for faster turnaround time. No contracts to sign. We can arrange for lease/purchase of Holter equipment. Now is the time to own your own recorder for as little as $49 a month. Call DCG Interpretation 313 879-8860.

Office Space/Property

Medical office space for lease in Duncanville. Ready to occupy, six exam rooms with sinks, reception area, records area, and private office. Two spaces available. Each area approximately 1,500 square feet. Below market rate. 214 296-2020, Jim Denning.

Ski Steamboat Springs, Colorado—Doctor's luxury condo, sleeps six, two baths, sauna, hot tub, cable TV, WBFP. Free shuttle to lifts (½ mile). Direct American Airlines flight from DFW. January 2-9, March 5-12. For details call 214 227-2324.

Internist-FP to take over 34 year internal medicine practice. Retiring. Practice free. 1,700 sq. ft. modern building for sale at market price or can lease. Fully equipped, x-ray, full lab, EKG, tables, cabinets, typewriters, copying machines, at less than 20% replacement cost. Arrangements flexible. Roy Daugherty, MD, 4006 W. 33rd, Amarillo, Texas 79109; 806 355-7447.

Ambulatory Care Center for sale or lease, Amarillo, Texas. Great opportunity, well established, fully equipped with x-ray and laboratory. Located on heavily traveled commercial district. Write Ad-685, TEXA5 MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Austin—Medical office space in Medical Science Center, 711 West 38th Street. Approximately 1,577 square feet, condominium unit for sale or lease. Prime location, two blocks from Seton Hospital. Two exam rooms, office, reception, two private offices, generous built-ins, phone system installed. 512 346-2100, KRT Management, P.O. Box 9802-138, Austin, Texas 78766.

Practices

Practice For Sale—Bryan. Doctor retiring for health reasons. Well established family practice. Excellent for internal medicine or family practitioner. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker. 214 327-7765.

Practice For Sale—Dallas, Casa Linda/White Rock East area. Doctor retiring. Well established practice, excellent for internal medicine or family practice. Contact PMA, Gary Clinton, Medical/Dental Appraisor, Consultant, Practice Broker. 214 327-7765.

For Sale—Family practice, West, Texas, very large clinic, room for two family practice doctors. High gross, excellent net. Six treatment rooms, well equipped. Osteopathic practice. Contact Gary Clinton, PMA, 214 327-7765. Practice Appraisals/Sales. Health care professional consultant for 14 years.

Internist (MD)—Excellent opportunity to purchase a fully equipped office (building, equipment, and practice) in Central Texas. Facility can accommodate three to six doctors. Two minutes from new 109-bed hospital. Terms possible. Call Clarence Miller, 512 353-1125, leave word.

Dallas, Gynecology—Rewarding gynecological practice, Baylor Hospital area, offered by retiring physician. 8oard eligible or certified candidates only. Unusual benefits; attractive option to own office space in joint venture medical building. Please reply to Ad-651, TEXA5 MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Walk-in clinic, college community in Central Texas. Population 110,000 with 250,000 trade area. Large industrial and commercial accounts as well as municipal and county. Good specialty coverage, two hospitals with ERs. Owner wants to sell due to age. Please reply to Ad-677, TEXA5 MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Best Houston location, growing medico-surgical practice. Excellent opportunity for individual or small group and with great added possibilities. Please reply to Ad-686, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

Otolaryngology Pratice For Sale—5an Antonio, Texas. Owner retiring July 1988. Will introduce. Located in medical center area, near several hospitals. Three exam rooms, audio area. Coverage with five other ENTs. Staffed. Please reply to Ad-683, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale, Texas City—Active general, industrial, and geriatric practice. Complete with laboratory, x-ray, and physical therapy equipment. Two local hospitals and near Galveston and Houston medical centers. Will consider sale, lease, or other arrangements. Retirement desired, but will consider staying on for orientation. For details, call 409 948-0083 or residence 713 337-2745.

BUSINESS AND FINANCIAL SERVICES

Professional practice evaluations and brokerage—We are results oriented. Call for information on appraisals (on-site and do-it-yourself), brokerage and exclusive reports on "Selling Your Practice" and "Conducting Negotiations." Use the best. Practice Dynamics, P.O. Box 821398, Houston, Texas 77282; 713 531-5938.

Physician's signature loans to $50,000. Up to seven years to repay. No prepayment penalties. Prompt, courteous service. Competitive fixed rate. Physicians Service Association, Atlanta, Georgia. Toll free 1-800-241-6905. Serving MDs for over ten years.

Appraisal and Valuation Services—Specializing in providing appraisal services for the health profession community. Seventeen years experience. Valuations for partnerships, buy-ins, litigation, divorce settlements, or practice sales. LHP Services Inc., 777 S. Central Expressway, Suite I-V, Richardson, Texas 75080. Contact Dan Lewis at 214 437-1180 office or 214 238-7129 evenings.

For residents, start-up practitioners, and established physicians—Unsecured signature loans $5,000-$60,000. No points or fees. Competitive rates, level payments. Up to six years to repay. Deferred principal option. No prepayment penalties. For information and application, call Austin 512 836-9126, MediFinancial, Harper, or 1-800-331-4952, MediVersal, Dept. 114.

CONTINUING EDUCATION

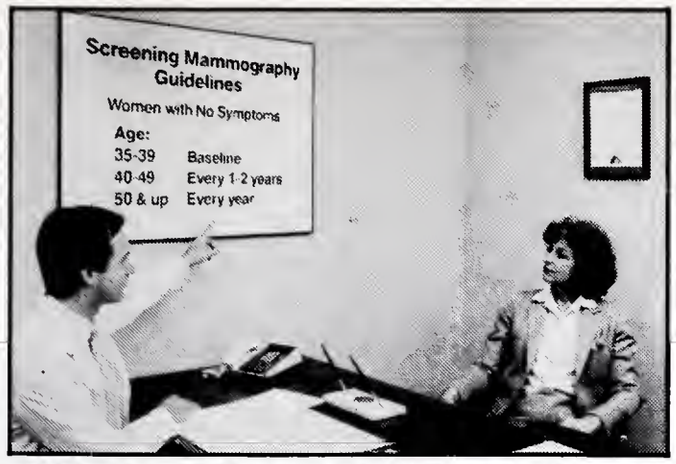
Lasers and Office Proctology Seminar—A unique seminar presented by Medical Lasers Inc. and Hemorrhoid Clinics of America. February 4-6, 1988, Hyatt Lake Tahoe. Includes comprehensive hands on laser lab, cryogenics and banding techniques, fiberoptic sigmoidoscopy. Preceptorship training available. For further information call 313 967-4140 or 1-800-367-2873, or write Medical Lasers, Inc., 22000 Greenfield, Oak Park, Michigan 48237.

Fifth Annual South Texas Perinatal-Neonatal Conference, Embassy Suites Hotel, McAllen, Texas, March 10-11-12, 1988. Credit: CME 12 hours. For further information contact Joyce Patrick at Javier Ramirez-Lavin, MD, Neonatology, P.O. Box 511S, McAllen, Texas 78502. 512 686-3401.

MISCELLANEOUS

Abortion Alternatives! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705; phone 512 472-9251. (Formerly Home of the Holy Infancy)

Advertising Rates & Data: Regular classified advertising sells for $39. (US currency) per issue for 50 words or less, payable in advance. Display classified advertising sells for $70. per column inch, per month. A variety of typefaces, logos and borders may be used in display classified ads. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings cannot be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Federal laws prohibit references to race, color, religion, sex, national origin, or age unless bona fide occupational qualifications. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.



What will you tell her about screening mammography?

Many of your patients will hear about screening mammography through a program launched by the American Cancer Society and the American College of Radiology, and they may come to you with questions. What will you tell them?

We hope you'll encourage them to have a screening mammogram, because that, along with your regular breast examinations and their monthly self examinations, offers the best chance of early detection of breast cancer, a disease which will strike one woman in 10.

If you have questions about breast cancer detection for asymptomatic women, please contact us.

AMERICAN CANCER SOCIETY Professional Education Dept
National Headquarters
90 Park Avenue
New York, New York 10016
or your local society

acr American College of Radiology 1891 Preston White Dr.
Reston, Virginia 22091
(703) 648-8900

SOUTHWEST MEDICAL ASSOCIATES

PHYSICIANS NEEDED

Southwest Medical Associates, Nevada's oldest and largest multispecialty group, has immediate full-time career positions in Family Practice, Internal Medicine, Endocrinology.

Positions offer excellent compensation and benefits plus pension and profit sharing. Malpractice and relocation expenses included.

Interested M.D. or D.O. should apply with CV to:

SOUTHWEST MEDICAL ASSOCIATES
Employment
P. O. Box 15645
Las Vegas, NV 89114-5645

Equal Opportunity Employer

Advertising Directory

Air Force	**2nd Cover**
American Physicians Insurance Exchange	**4**
American Physicians Life Insurance	**7**
Apple Leasing	**8**
BMW Center	**31**
Burroughs Wellcome	**19–21**
Campbell Laboratories, Inc.	**53**
Diagnostic Clinic of Houston	**44**
Family Practice Recertification	**54**
I. C. System, Inc.	**50**
Insurance Corporation of America	**16**
Eli Lilly & Company	**18**
The Medical Protective Company	**3rd Cover**
MEDS	**14**
Roche Laboratories	**1, 2**
Scott and White Clinic	**39, Back Cover**
SK&F Co.	**17**
Southwest Medical Associates	**30, 54, 71**
Spring Shadows Glen	**2nd Cover**
Starlite Village Hospital	**39**
Texas Department of Corrections	**25, 54**
Texas Medical Association	
Committee on Nuclear Medicine	**57**
Facts You Should Know About AIDS	**33**
Memorial Library	**58**
Texas Medical Association Insurance Program	**11**
Texas Medical Liability Trust	**26**
Timberlawn Psychiatric Hospital	**Back Cover**
The University of Texas Health Center at Tyler	**25**
The Upjohn Company	**35**

Texas Physicians' Directory	**60–66**
Classified Advertising	**68–71**

Publication of an advertisement in TEXAS MEDICINE is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

COURSES

JANUARY

Cardiovascular Disease

Jan 12-17, 1988
FRONTIERS OF CARDIOLOGY 1988. Arapahoe Lodge, Winter Park, Colo. Fee $50. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Earl Beard, MD, Section of Cardiology, Kelsey-Seybold Clinic, 6624 Fannin, Houston, TX 77030 (713) 797-1551

Jan 11-15, 1988
19TH ANNUAL CARDIOVASCULAR CONFERENCE. Convention Center, Snowmass, Colo. Fee $375 members of American College of Cardiology, $470 nonmembers of ACC, $175 fellows and residents. Category 1, AMA Physician's Recognition Award; 23 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Internal Medicine

Jan 28, 1988
CURRENT TOPICS: CHOLESTEROL AND OTHER RISK FACTORS IN HEART DISEASE. Marriott Hotel-Medical Center, Houston. Fee $50 physicians, $25 non-Baylor College of Medicine fellows and residents. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Orthopedic Surgery

Jan 16, 1988
DIABETIC FOOT CONFERENCE. Location TBA. Fee TBA. Credit TBA. Contact The University of Texas Health Science Center, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Otolaryngology

Jan 31-Feb 5, 1988
SURGICAL ANATOMY AND TECHNIQUES OF THE TEMPORAL BONE. Validmar Jordan Laboratory, Dallas. Fee $675, $475 residents. Category 1, AMA Physician's Recognition Award; 46 hours. Contact Ann Hood, RN, 3600 Gaston Ave, Barnett Tower, #1105, Dallas, TX 75246 (800) 443-1762

Plastic Surgery

Jan 22-24, 1988
BREAST RECONSTRUCTION/4TH ANNUAL EDUCATIONAL SYMPOSIUM. St Joseph's Hospital, Atlanta. Fee $450. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Bonnie Seitz, Breast Reconstructive Symposium, Southeastern Society of Plastic and Reconstructive Surgeons, 6027 Walnut Grove Rd, Suite 216, Memphis, TN 38119

Pediatrics

Jan 12-17, 1988
17TH ANNUAL PEDIATRIC POSTGRADUATE COURSE/PEDIATRIC UPDATE 1988. Camino Real, Puerto Vallarta, Mexico. Fee TBA. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Ann Boehme, Schneider Children's Hospital of Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

Psychiatry

Jan 29, 1988
WOMEN'S ISSUES IN THERAPY. Weiss Auditorium, Methodist Medical Center, Dallas. Fee $30. Category 1, AMA Physician's Recognition Award; 4 hours. Contact Gonzalo Aillon, MD, 3450 Wheatland Rd, Ste 120, Dallas, TX 75237 (214) 296-6241

Radiology

Jan 25-29, 1988
ANATOMY FOR RADIOTHERAPY TREATMENT PLANNING. The University of Texas Health Science Center, San Antonio, Tex. Fee $650. Category 1, AMA Physician's Recognition Award; 36 hours. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Sports Medicine

Jan 21-23, 1988
15TH ANNUAL SPORTS MEDICINE SYMPOSIUM. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Urology

Jan 23-24, 1988
TRANSITIONAL CELL CARCINOMA OF THE URINARY TRACT. Teaching Center Auditorium, Long Island Jewish Medical Center, New Hyde Park, NY. Fee $250, $100 residents. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Ann Boehme, Associate Director for Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042 (718) 470-8650

FEBRUARY

Anesthesiology

Feb 7-18, 1988
BAY-CAP XI: TACO IV. Hawaii, Kauai, Maui. Fee $350 one meeting, $495 both meetings. Category 1, AMA Physician's Recognition Award; 34 hours. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Cardiovascular Disease

Feb 1-3, 1988
STATE OF THE ART: 2-D/DOPPLER AND COLOR FLOW IMAGING. Sheraton Tucson El Conquistador, Tucson, Ariz. Fee $400 members of American College of Cardiology, $465 non members of ACC, $285 residents and fellows. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Registration Secretary, Extramural Programs Dept, American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814 (800) 253-4636

Feb 11-13, 1988
2ND ANNUAL UCSD-SHARP MEMORIAL HOSPITAL INTERNATIONAL CARDIAC SYMPOSIUM: CLINICAL STRATEGIES IN COMPLEX VALVULAR HEART DISEASE. US Grant Hotel, San Diego. Fee $350. Cate-

gory 1, AMA Physician's Recognition Award; 16 hours. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Dermatology

Feb 20-27, 1988
POST-GRADUATE COURSE: DUKE AT VAIL: FRONTIERS IN DERMATOLOGY AND RHEUMATOLOGY. Marriott's Mark Resort, Vail, Colo. Fee $350 physicians, $250 residents, interns. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Angelika Langen, Box 3135, Duke University Medical Center, Durham, NC 27710 (919) 684-2504

Family Medicine

Feb 21-26, 1988
19TH FAMILY MEDICINE REVIEW/SESSION 1. Hyatt Regency Hotel, Lexington, Ky. Fee TBA. Category 1, AMA Physician's Recognition Award; hours TBA. Contact Joy Greene, Continuing Medical Education, University of Kentucky, 132 College of Medicine Office Bldg, Lexington, KY 40536-0086 (606) 233-5161

General Medicine

Feb 24, 1988
THROMBOSIS, ANTICOAGULANT AND ANTIPLATELET AGENTS IN CLINICAL PRACTICE. Marriott Medical Center, Houston. Fee $50. Category 1, AMA Physician's Recognition Award; 7 hours. Contact Vicki Forgac, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Geriatrics

Feb 15-17, 1988
RECENT ADVANCES IN GERIATRIC REHABILITATION 1988: WHAT IS IT? WHO NEEDS IT? WHAT WORKS? Holiday Inn at the Embarcadero, San Diego, Calif. Fee $295 physicians, $195 residents, $125 full-time or non-practicing students. Category I, AMA Physician's Recognition Award; 18 hours. Contact Office of Continuing Medical Education, University of California San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Feb 18-20, 1988
MANAGEMENT OF THE ELDERLY II. Sheraton Bal Harbour, Bal Harbour, Miami Beach, Fla. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Feb 27-28, 1988
9TH ANNUAL GERIATRIC MEDICINE: SELECTED TOPICS. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact UTHSC, Office of Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Neurology

Feb 2-7, 1988
NEUROLOGY UPDATE 1988. Sheraton Bal Harbour, Bal Harbour, Miami Beach, Fla. Fee TBA. Credit TBA. Contact the University of Miami School of Medicine, Division of Continuing Medical Education D23-3, PO Box 016960, Miami, FL 33101 (305) 547-6716

Obstetrics and Gynecology

Feb 25-27, 1988
CONTRACEPTION, STERILIZATION, AND SEXUALLY TRANSMITTED DISEASE/FREESTANDING POSTGRADUATE COURSE. Scottsdale, Ariz. Fee $445. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Robin Murray, American College of Obstetrics and Gynecology, 600 Maryland Ave SW, Washington, DC 20024-2588 (202) 863-2543

Oncology

Feb 4-6, 1988
3RD INTERNATIONAL CONFERENCE ON MONOCLONAL ANTIBODY IMMUNOCONJUGATES FOR CANCER. Hotel Inter-Continental, San Diego. Fee $310 before Dec 1, $365 after Dec 1. Category 1, AMA Physician's Recognition Award; 19 hours. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Feb 25-27, 1988
2ND INTERNATIONAL CONFERENCE ON INTRACAVITARY CHEMOTHERAPY. US Grant Hotel, San Diego. Fee $300. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Office of Continuing Medical Education, M-017, University of California at San Diego School of Medicine, La Jolla, CA 92093 (619) 534-3940

Pathology

Feb 11-14, 1988
6TH ANNUAL CYTOPATHOLOGY REVIEW COURSE. Lincoln Hotel-Post Oak, Houston. Fee $425 pathologist, $300 cytotechnologist, residents, fellows. Category 1, AMA Physician's Recognition Award; 31 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Plastic Surgery

Feb 26-28, 1988
RHINOPLASTY: AN EDUCATIONAL SYMPOSIUM. The University of Texas Health Science Center, Dallas. Fee $350 physicians, $200 residents, $100 lab dissection fee. Category 1, AMA Physician's Recognition Award; 21 hours. Contact Ann Parchem, Division of Continuing Education, UTHSC, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Surgery

Feb 15-17, 1988
4TH ANNUAL HOUSTON CONFERENCE ON NEUROTRAUMA. Westin Galleria Hotel, Houston. Fee $295. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Michael Miner, MD, PhD, Division of Neurosurgery, The University of Texas Medical School, 6431 Fannin, Room 7.148, Houston, TX 77030 (713) 792-5760

Urology

Feb 11-13, 1988
CALCULI UPDATE 1988. Acapulco, Mexico. Fee $250 members of AUA, $350 nonmembers. Category 1, Physician's Recognition Award; 16 hours. Contact Alice Henderson, 6750 West Loop South, Ste 900, Bellaire, TX 77401 (713) 665-7500

Feb 12-13, 1988
GENERAL UROLOGY CONFERENCE. Four Seasons Hotel, San Antonio, Tex. Fee $125. Credit TBA. Contact Kathleen O'Shea, Centers of Excellence, Humana Hospital, 8026 Floyd Curl Dr, San Antonio, TX 78229 (512) 692-7875

MARCH

Allergy

March 2-6, 1988
1988 PAN AMERICAN ALLERGY SOCIETY TRAINING COURSE AND SEMINAR. Four Seasons Hotel, San Antonio, Tex. Fee $285 course, $140 seminar for members of PAAS; $335 course, $160 seminar for nonmembers; Category 1, AMA Physician's Recognition Award; 30 hours. Contact Betty Kahler, PAAS, 229 Parking Way, Lake Jackson, TX 77566 (409) 297-5635 or (409) 297-4069

Cardiovascular Disease

March 27-30, 1988
PRACTICAL ASPECTS OF CARDIOVASCULAR DISEASE AND RENAL DRUGS. Contemporary Resort, Lake Buena Vista, Walt Disney World, Fla. Fee TBA. Credit TBA. Contact Division of Continuing Medical Education D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Emergency Care

March 6-11, 1988
9TH ANNUAL MAMMOTH MOUNTAIN EMERGENCY MEDICINE SKI

CONFERENCE. Mammoth Lakes, Calif. Fee $350 physicians, $250 physicians in training and physician assistants. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Daniel Abbott, MD, Medical Conferences, Inc, CME Travel Service, 1615 S Mission Rd, Suite 3, Fallbrook, CA 92028 (1-800) 457-2777

Endocrinology

March 26, 1988
DIABETES 1988: NEWEST DEVELOPMENTS IN PATIENT CARE. Stouffer Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Department of Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

March 28-30, 1988
KIDNEY STONES: PREVENTION AND TREATMENT. Masur Auditorium, Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, Md. Fee TBA. Credit TBA. Contact Conference Registrar, Prospect Associates, Suite 500, 1801 Rockville Pike, Rockville, MD 20852 (301) 468-6338

Family Medicine

March 14-18, 1988
2ND ANNUAL UPDATE ON PRIMARY CARE. The Ranch, Steamboat Springs, Colo. Fee $300. Category 1, AMA Physician's Recognition Award, 18 hours. Contact Larry McLain, MD, Dept of Pediatrics, Loyola University Medical Center, 2160 South First Ave, Maywood, IL 60153 (312) 531-3195

March 17-20, 1988
13TH ANNUAL FAMILY PRACTICE RECERTIFICATION REVIEW. Hilton Palacio del Rio-Riverwalk, San Antonio, Tex. Fee TBA. Credit TBA. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

General Medicine

March 16-19, 1988
HIGHLIGHTS IN WOMEN'S HEALTH CARE: CARDIOVASCULAR FITNESS, BREAST DISEASE, MENOPAUSE. Orlando, Fla. Fee $300. Category 1, AMA Physician's Recognition Award; 18 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 South 31st St, Temple, TX 76508 (817) 774-4083

Geriatrics

March 13-16, 1988
GERIATRIC MEDICINE RECERTIFICATION REVIEW. Hilton Palacio Del Rio-Riverwalk, San Antonio, Tex. Fee TBA. Credit TBA. Contact Continuing Medical Education, The University of Texas Health Science Center, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

March 19-26, 1988
THE BRITISH EXPERIENCE: A STUDY TOUR IN ENGLAND ON PUBLIC AND PRIVATE CARE INNOVATIONS FOR THE AGED. England. Fee TBA. Credit TBA. Contact Pat Ashton, Holbrook Travel, 3540 N. W. 13th St, Gainesville, FL 32609 (800) 451-7111

Medical Education

March 6-10, 1988
ADVANCES IN MEDICAL EDUCATION. Copper Mountain, Colo. Fee $425. Category 1, AMA Physician's Recognition Award; 20 hours. Contact Susan Larson, Scott and White Memorial Hospital, 2401 South 21st St, Temple, TX 76508 (817) 774-4083

Obstetrics and Gynecology

March 12, 1988
CURRENT CLINICAL PRACTICE IN OBSTETRICS AND GYNECOLOGY. Grand Kempinski Hotel, Dallas. Fee TBA. Credit TBA. Contact Diane Pitkin, Dept of Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

March 25-26, 1988
CURRENT CONCEPTS IN OBSTETRICS AND GYNECOLOGY. Inn on the Park, Houston. Fee $250 physicians, $125 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 16 hours. Contact Vicki Forgac, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030 (713) 799-6020

Ophthalmology

March 18-20, 1988
CLINICAL ADVANCES IN OPHTHALMOLOGY FOR THE PRACTICING OPHTHALMOLOGIST/THE CULLEN COURSE 1988. Houstonian Hotel and Conference Center, Houston. Fee $250 physicians, $125 non-Baylor residents and fellows. Category 1, AMA Physician's Recognition Award; 11 hours. Contact Carol Soroka, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

March 25-26, 1988
10TH ANNUAL DALLAS SPRING OPHTHALMOLOGY SYMPOSIUM. Location TBA. Fee TBA. Credit TBA. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Ln, Dallas, TX 75231 (214) 696-8458

Otolaryngology

March 10-12, 1988
CURRENT CLINICAL CONCEPTS IN OTOLARYNGOLOGY. Sheraton Bal Harbour, Miami. Fee TBA. Credit TBA. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Pathology

March 7-11, 1988
CURRENT CONCEPTS IN TOXICOLOGY. The University of Texas Health Science Center, San Antonio, Tex. Fee TBA. Credit TBA. Contact Continuing Medical Education, UTHSC, 7703 Floyd Curl Dr, San Antonio, TX 78284-7980 (512) 567-4444

Physical Medicine and Rehabilitation

March 21-31, 1988
22ND COMPREHENSIVE REVIEW COURSE IN PHYSICAL MEDICINE AND REHABILITATION. Holiday Inn-Medical Center, Houston. Fee $450 physicians, $420 non-Baylor residents. Credit TBA. Contact Lila Lerner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Plastic Surgery

March 17-20, 1988
HAIR REPLACEMENT SURGERY. Four Seasons Hotel, Los Angeles. Fee $525 physician members American Academy of Facial Plastic and Reconstructive Surgery before Feb 17, $575 physician members after Feb 17; $625 nonmembers AAFRPS before Feb 17, $675 after Feb 17; $125 member residents before Feb 17, $175 member residents after Feb 17; $200 nonmember residents before Feb 17, $250 nonmember residents after Feb 17. Category 1, AMA Physician's Recognition Award; 30 hours. Contact AAFRPS Foundation, 1st American Bank N/A, 740 15th St NW, Washington, DC 20005 Attn: Lock Box Dept

Surgery

March 2-6, 1988
HEAD AND NECK RECONSTRUCTIVE SURGERY 1988. San Luis Hotel, Galveston, Tex. Fee $550 members AAFPRS, $650 nonmembers, $400 resident members, $450 resident nonmembers, $200 lab sessions. Category 1, AMA Physician's Recognition Award; 31 hours. Contact Martha Berlin, Office of Continuing Education, The University of Texas Medical Branch, 3.324 Learning Center, Route J-34, Galveston, TX 77550-2782 (409) 761-2934

APRIL

Family Medicine

April 12-17, 1988
4TH ANNUAL FAMILY MEDICINE REVIEW. Austin, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 South 31st St, Temple, TX 76508 (817) 774-4083

General Medicine

April 23, 1988
ST PAUL DAY IN RHEUMATIC DISEASES. Dallas. Contact Diane Pitkin, Dept of Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Orthopedic Surgery

April 13-17, 1988
INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE. Miami. Contact Division of Continuing Medical Education, D23-3, University of Miami School of Medicine, PO Box 016960, Miami, FL 33101 (305) 547-6716

Pediatrics

April 6-9, 1988
SYMPOSIUM ON RESPIRATORY TRACT INFECTION IN CHILDREN/ 8TH ANNUAL NATIONAL PEDIATRIC INFECTIOUS DISEASE SEMINAR. New Orleans. Contact Marian Troup, Dept of Pediatrics, Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-3439 or (214) 688-2166

April 15-16, 1988
PEDIATRIC POSTGRADUATE SYMPOSIUM/1988. Houston. Contact Lila Lerner or Vicki Forgac, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Physical Medicine and Rehabilitation

April 8-9, 1988
SALVAGING THE DIABETIC FOOT. Location TBA. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

April 22, 1988
OCCUPATIONAL AND REHABILITATIVE MEDICINE. Temple, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 South 31st St, Temple, TX 76508 (817) 774-4083

Psychiatry
April 9, 1988
UPDATE ON CHEMICAL DEPENDENCY. Location TBA. Contact Diane Pitkin, Dept of Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Surgery

April 5-9, 1988
CURRENT TOPICS IN GENERAL SURGERY. Kona, Hawaii. Contact June Bovill, Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

MAY

Cardiovascular Disease

May 28-30, 1988
MASTER APPROACH TO CARDIOVASCULAR PROBLEMS. Orlando, Fla. Contact Yolanda Barcena, Division of Cardiology, University of Miami School of Medicine, PO Box 016969, Miami, FL 33101 (305) 549-7124 or (305) 549-6975

Family Medicine

May 16-20, 1988
12TH ANNUAL REVIEW COURSE IN FAMILY PRACTICE. Houston. Contact Vicki Forgac or Carol Soroka, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

General Medicine

May 7, 1988
HEART DISEASE IN OFFICE PRACTICE. Dallas. Contact Diane Pitkin, Dept of Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

Internal Medicine

May 16-20, 1988
UPDATES IN INTERNAL MEDICINE. Location TBA. Contact Ann Parchem, Division of Continuing Education, The University of Texas Health Science Center, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

May 23-27, 1988
ADVANCES IN INTERNAL MEDICINE. San Francisco. Contact Postgraduate Programs, Dept of Medicine, University of California, 505 Parnassus, M979, San Francisco, CA 94143-0120 (415) 476-5208

Ophthalmology

May 27, 1988
YAG/ARGON WORKSHOP FOR OPHTHALMOLOGISTS. Location TBA. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Ln, Dallas, TX 75231 (214) 696-8458

Orthopedic Surgery

May 6-8, 1988
SOUTHWESTERN ORTHOPEDIC SURGERY REVIEW. Location TBA. Contact June Bovill, Division of Continuing Education, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Pathology

May 19-21, 1988
CURRENT ISSUES IN SURGICAL PATHOLOGY, VII. Dallas. Contact Ann Parchem, Division of Continuing Education, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2166

Physical Medicine and Rehabilitation

May 5-7, 1988
6TH ANNUAL CHRONIC PAIN COURSE: EVALUATION AND MANAGEMENT. Houston. Contact Lila Lerner, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Surgery

May 26-29, 1988
AIDS, HEPATITIS, AND BLOOD TRANSFUSION: IMPACT ON SURGICAL PRACTICE. Charleston, SC. Contact Pat Curl, Meeting Coordinator, Cardiothoracic Research and Education Foundation, PO Box 33185, San Diego, CA 92103 (619) 692-9115

JUNE

Family Medicine

June 4, 1988
FAMILY PRACTICE CLINICAL ENCOUNTERS 1988. Dallas. Contact Linda Spino, PhD, Dept of Family Practice and Community Medicine, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235 (214) 688-2134 or (214) 688-2166

General Medicine

June 11, 1988
13TH ANNUAL INFECTIOUS DISEASES SEMINAR. Location TBA. Contact Diane Pitkin, Dept of Medical Education, St Paul Medical Center, 5909 Harry Hines Blvd, Dallas, TX 75235 (214) 879-3789

June 15-18, 1988
2ND ANNUAL WOMEN'S HEALTH ISSUES. South Padre Island, Tex. Contact Susan Larson, Scott and White Memorial Hospital, 2401 South 31st St, Temple, TX 76508 (817) 774-4083

Obstetrics and Gynecology

June 2-5, 1988
WORKSHOPS IN GYNECOLOGICAL MICROSURGERY/LASER AND

OPERATIVE LAPAROSCOPY. Dallas. Contact Lela Breckenridge, Continuing Medical Education, Presbyterian Hospital, 8200 Walnut Hill Lane, Dallas, TX 75231 (214) 696-8458

Ophthalmology

June 12-17, 1988
ACUTE CARE PEDIATRICS: REVIEW AND UPDATE OF THE STATE OF THE ART. Hilton Head Island, SC. Contact Carol Soroka or Vicki Forgac, Office of Continuing Medical Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

REGULARLY SCHEDULED ACTIVITIES

Monday-Friday
POSTGRADUATE WORKSHOP IN NEURORADIOLOGY. (Date assigned by individual request.) Methodist Hospital, Houston. Fee $450. Category I, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Monday-Friday
POSTGRADUATE WORKCOURSE IN DIAGNOSTIC ULTRASOUND. (Date assigned by individual request.) Ben Taub General Hospital, Houston. Fee $600. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Tuesdays, 12 pm
MEDICAL AND SURGICAL REVIEWS. Sierra Medical Center, El Paso, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact M. Nazemi, MD, Sierra Medical Center, 1625 Medical Center Dr, El Paso, TX 79902

Tuesdays (all but last Tuesday of each month)
SURGICAL GRAND ROUNDS. Board Room, Brackenridge Hospital, Austin, Tex. Free. Category 1, AMA Physician's Recognition Award; 1-hour session. Contact Nancy Strandhagen, Surgery Education, Central Texas Medical Foundation, 601 E 15th St, Austin, TX 78701 (512) 476-6461 ext 5172

Thursdays, 8 am
INTERNAL MEDICINE GRAND ROUNDS. Brackenridge Hospital, Austin, Tex. Category 1, AMA Physician's Recognition Award; 1 hour weekly. Contact Janna Ashford, Central Texas Medical Foundation, 1500 East Ave, Austin, TX 78701 (512) 480-1869

Thursday-Friday
POSTGRADUATE WORKSHOP IN REAL-TIME OBSTETRICAL ULTRASONOGRAPHY. (Date assigned by individual request.) Jefferson Davis Hospital, Houston. Fee $375. Category 1, AMA Physician's Recognition Award; 16 hours; ACOG, 16 cognates. Contact Vicki Forgac, Office of Continuing Education 184-A, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Fridays, 12 pm (2nd and 4th)
TEACHING CASE CONFERENCE. Park Place Hospital, Port Arthur, Tex. Category 1, AMA Physician's Recognition Award; 2 hours monthly. Contact Phil Newman, MD, Box 1648, Port Arthur, TX 77640 (409) 983-4951

Date assigned by individual request
VISITING FELLOWSHIP IN MRI. The Methodist Hospital, Houston. Fee $1,000 physicians; $500 residents and fellows. Category 1, AMA Physician's Recognition Award; 40 hours. Contact Tamara Greiner, Office of Continuing Education, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (713) 799-6020

Date assigned by individual request
MICROSURGERY COURSE. Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston. Fee $1,000 physicians for 40 hours; $1,600 physicians for 80 hours; $800 residents and fellows for 40 hours; $1,200 residents and fellows for 80 hours. Category 1, AMA Physician's Recognition Award. Contact Monica Joerger, Microsurgery Lab, Room 443E, Baylor College of Medicine, Houston, TX 77030 (713) 799-4536

Feb-April 1988/April 25-May 6, 1988
29TH ANNUAL POSTGRADUATE INSTITUTE FOR PATHOLOGISTS IN CLINICAL CYTOPATHOLOGY/SUBSPECIALTY RESIDENCY IN CLINICAL CYTOPATHOLOGY. Home Study Course A, Feb-April; In-Residence Course B, April 25-May 6, 1988. Johns Hopkins Medical Institutions, Baltimore, MD. Pre-registration must be accomplished before March 25, 1988. Contact John Frost, MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205 (301) 955-3522

TELECONFERENCE NETWORK OF TEXAS

Every other Thursday, 12:30 pm
CLINICAL TOPICS IN MEDICINE. The University of Texas Health Science Center, San Antonio, Tex, and teleconference network sites. Fee $35 program, hospital subscription program. Category 1, AMA Physician's Recognition Award. Contact Phyllis Wood, Acting Director, Teleconference Network of Texas, 7703 Floyd Curl Dr, San Antonio, TX 78284 (512) 691-7291

PRACTICE MANAGEMENT WORKSHOPS

The following are practice management workshops and seminars sponsored by the Texas Medical Association. Participants in the workshops and seminars will receive Category 1 credit toward the AMA Physician's Recognition Award where indicated. For further information, contact the Department of Practice Management, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704.

DECEMBER

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Dec 2-3, 1987, Tarrant County Medical Society Headquarters, Fort Worth
Dec 4-5, 1987, Holiday Inn, Temple
Dec 8-9, Marriott Hotel-Astrodome, Houston
Dec 10-11, 1987, The University of Texas Health Science Center Medical School, San Antonio

JANUARY

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Jan 26-27, 1988, Baylor University Medical Center, Dallas
Jan 28-29, 1988, The University of Texas Medical Branch, Galveston

FEBRUARY

HOW TO GET STARTED IN MEDICAL PRACTICE—11 hours
Feb 9-10, 1988, The University of Texas Health Science Center, San Antonio
Feb 11-12, 1988, Marriott Hotel-Astrodome, Houston

CALENDAR OF MEETINGS ■Denotes Texas Meetings

JANUARY

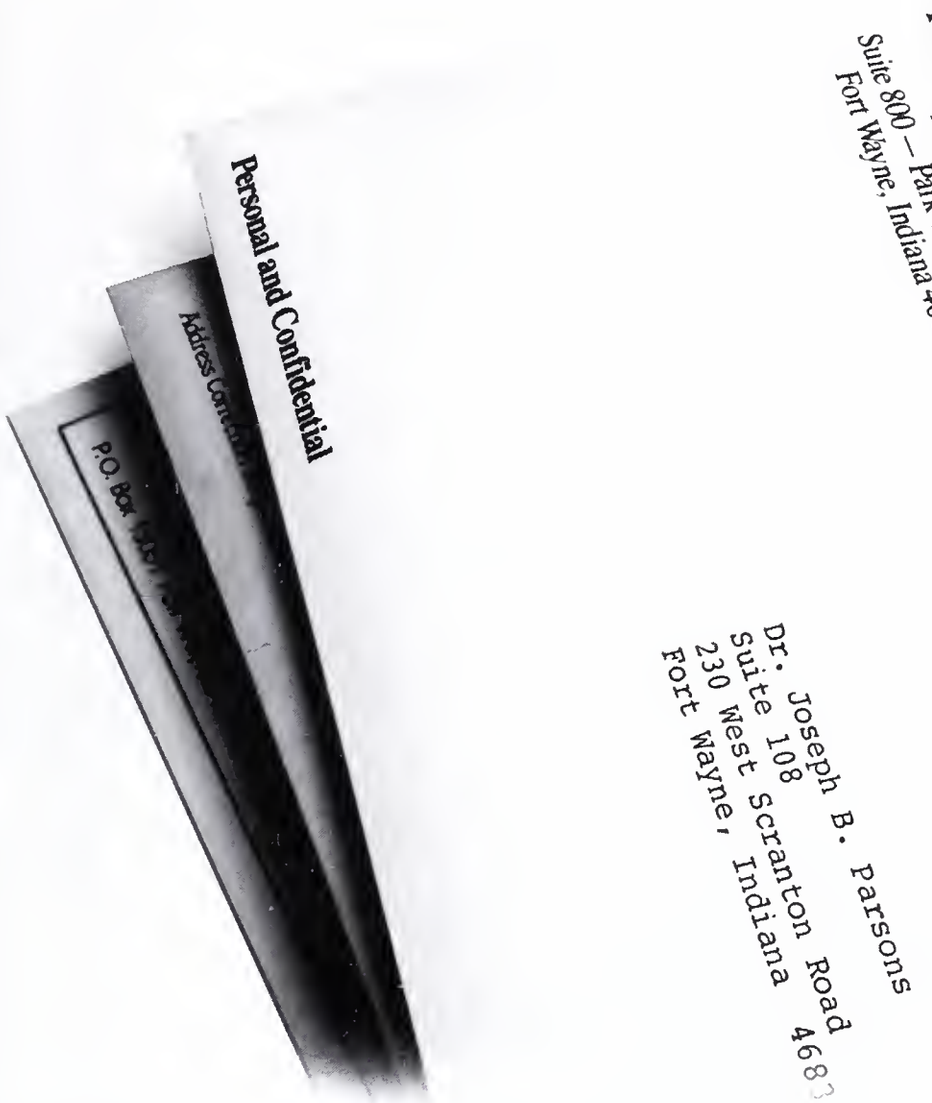
■TEXAS SOCIETY OF PATHOLOGISTS ANNUAL MEETING, Galveston, Jan 29-31, 1988. Contact Iris Wenzel, TSP, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

FEBRUARY

SOUTHERN SOCIETY FOR PEDIATRIC RESEARCH ANNUAL CONVENTION, New Orleans, Feb 3-5, 1988. Contact Richard Jacobs, MD, SSPR, Arkansas Children's Hospital, 800 Marshall St, Little Rock, AR 72202-3591 (501) 370-1416

■**TEXAS MEDICAL ASSOCIATION WINTER CONFERENCE**, Austin, Feb 5-7, 1988. Contact Texas Medical Association, 1801 N Lamar Blvd, Austin, TX 78701 (512) 477-6704

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Bruce Crim, Keith H. Prince
Charles F. Curtice, Daniel S. Marley
Suite 570, Allied Lakewood Bank Center, 6301 Gaston Avenue
Dallas TX 75214-3947, (214) 821-4640

L. Wayne Kirk, Richard B. Ross, Rick D. Bolin
Suite 155, 7887 Katy Freeway
Katy Hollow Office Park
Houston, TX 77024, (713) 682-8024

Michael Rollans
Thomas A. Weisman
512 GPM Life Building
San Antonio, TX 78216, (512) 344-5901

S&W SCOTT&WHITE

Texas A&M University
College of Medicine

ADVANCES IN MEDICAL EDUCATION

Recent Advances in Education Concepts
for Training Medical Students and Residents

March 6-10, 1988

Copper Mountain Resort, Colorado

Featuring

DR. MILTON CORN - Dean, Georgetown University School of Medicine, Washington, D.C.

DR. DAVE IRBY - Assistant Dean for Planning, University of Washington, Seattle, Washington.

DR. COLEMAN BENDER - Professor, Speech & Communication University of Hawaii, Honolulu, Hawaii.

Special Emphasis On:

Evaluation Systems, Teaching Methods, Effective Communications and Teaching in Ambulatory Settings.

HIGHLIGHTS IN WOMEN'S HEALTH CARE

Cardiovascular Fitness
Breast Disease
Menopause

March 16-19, 1988

Embassy Suites Hotel
Plaza International
Orlando, Florida

Guest Faculty

MORRIS NOTELOVITZ, M.D. - Director, Climacteric Center, Gainesville, Florida.

JAMES H. O'KEEFE, JR., M.D., - Cardiologist, Mid America Heart Institute, St. Luke's Hospital of Kansas City, Kansas City, Missouri.

Area Attractions

Baseball Spring Training - (Six Major League Teams).
Walt Disney World/EPCOT Center

For more information or to register, contact: Office of Continuing Medical Education, (817) 774-4073, Scott and White, Temple, Texas 76508.

Timberlawn Psychiatric Hospital

Established in 1917
Children · Adolescents · Adults

- 232 Inpatient Beds
- Outpatient Services
- Partial Hospitalization Programs
- Residential Services
- Departments of Psychology and Social Work
- Family Assessment and Treatment
- Substance Abuse Services
  Inpatient and Outpatient Programs
  Health Professionals Program
  Residential After Care
- Psychiatric Residency Training Program
- Child Residency Training Program
- JCAH Approved

Admissions: P.O. Box 11288 Dallas, Texas 75223; 214/381-7181; 1-800-426-4944

2 7277

515789

3 1378 00515 7899

UC San Francisco LIBRARY

UNIVERSITY OF CALIFORNIA · UNIVERSITY OF CALIFORNIA